THEORIES OF DEVELOPMENT OF MATERIAL AND HUMAN RESOURCES AND EDUCATION

ARUN BOSE

The approach adopted in this book cuts new ground by identifying 'living beyond their means' by over-stress on non-basic activities and goods by the countries concerned as the prime cause of limited development. It also focuses on the development of human resources and education as a major aspect of development strategy, attaching equal importance to it and the development of material resources.

Its point of departure is an incisive criticism of conventional development strategies adopted since the 1950s assisted by the inter-country world-wide empirical indicators of the period 1960s to the 1980s now available. The book discusses every kind of development experience, but puts the spotlight on 'developed under-development' of countries like India. A companion volume, *India's Social Crisis* has just been published.

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THEORIES OF DEVELOPMENT OF MATERIAL AND HUMAN RESOURCES AND EDUCATION : REQUIEM OR RETHINKING ?

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ARUN BOSE

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PREFACE

The economics of development of material and human resources and of education, has always subsumed the politics or the 'sociology' of development to some extent. It has hitherto been studied in various formats by policy-makers in governments (e.g., P. C. Mahalanobis, in India) or policy-proposers in the U. N. organization (e.g. Hans Singer when he was in the U. N. secretariat or later P. N. Rosenstein-Rodan in U. N. commissions), or teachers and students of development policy among academics (e.g., Ragnar Nurkse, Paul Baran, Oskar Lange, Maurice Dobb and a host of others whose names appear later in this study). Until quite recently, the preferred format among policy-makers at least was policy fleshed out with statistics drawn from a growing 'data base' of underdeveloped or developing economies. This was natural, since many of them have been (and are and will be like Mahalanobis) physicists, statisticians or historians or demographers or sociologists or anthropologists, or all of these combined, rather than economists. Policy-makers drawn from such diverse disciplines naturally found it convenient to grapple with issues of development policy when its models of development, originally cast in algebraic terms, were reduced to inter-relations between simple statistics like GNP, GNP per capita, savings ratios and capital-output ratios, investment-patterns with minimal disaggregation, indices of poverty, etc.

However, there never was any doubt that the bare bones of problems of development were to be found in the corpus and concepts of economic theory which underlay the statistical presentations. This was so, even if, as Keynes emphasised, when he became for a time the best known policy-maker of the world of advanced capitalism, the policy-makers were 'unconscious' theorists, unaware of economic theories which they were often rediscovering without knowing it.

Now, as long as the format of statistical presentations more or less coincided with the message of the underlying theory, and statistically determined targets and statistically measured outcomes roughly converged, neglect of theory did not matter overmuch. But in recent years, all except the most complacent policy-makers have become 'theory-minded', groping for new theoretical foundations to development economics, especially when remaking the statistical data base does not by itself seem to solve many problems.

Indeed, there is a groping or an active search in some cases, for new theoretical approaches and concepts to be seen all over the place : among policy-makers and policy-proposers, whatever their academic background, no less than among economists. Some of the latest innovations in general economic theory—or in mathematics or sociology—are being tried out to handle the specific problems of development economics. Development economics is becoming, rather more definitely than it has always been to some extent, the political economy, or social theory or social philosophy of development processes. The confidence, shared by economists and physical scientists alike who are new to development problems, that development economics is the best short introduction to whatever need be known about the politics of sociology of development or of education, has been badly shaken.

The present study has been undertaken in response to an initiative by Professor Ngo Manh-Lan of the Institut de Sciences Mathematiques et Economique Appliques Paris. It is an attempt to explore, critically, autocritically and constructively, a radically new approach to the problems of development of material and human resources and of education. Of course, as is always the case, its novelty is *not* ab initio. Many of its analytical insights and concepts were already there, when the search started for a development economics four decades ago. Others have emerged more recently through attempts to overcome the inadequacies of the earliest vision. Still others have, however, emerged to correct errors of logic, now detected as crucial, thanks to the enriched logic of recent advances in general economic theory as well as the practical misadventures in the implementation of the policy prescriptions of the 'old' development economics.

The new approach adopted in this book cuts new ground by attaching *equal* importance to the development of both material and human resources. Included in the latter are education, at both higher and lower levels, and education in both the social and the physical sciences. It also cuts new ground by relating its diagnosis of the causes of development to the cause of causes to which they can be reduced, viz. the *primum immobile* or the ultimate cause of "living beyond one's (or a nation's) means", understood in the *widest* sense of the term. This is the best, and absolutely accurate statement of the problem of underdevelopment, which is often made nowadays by Bhabatosh Datta, with reference to back-sliding in economic growth rates in the Soviet Union (or India). As the only one of better known development theorists the world over, who has written about underdevelopment from the vantage-point of living continuously without a break in the most underdeveloped city of the world, Calcutta for 40 years,—he ought to know.

This new approach is not, of course, an exercise in 'theory for theory's sake', any more than the 'old' development economics was. Its point of departure is subjection of policies prescribed by the 'old' development economics to the incisive criticism supplied by the empirical data of the 'development record' for the period over which these policy prescriptions began to be tried out in practice.

An honest attempt has been made, especially, in the 'reconstructive' later chapters, to make the presentation as simple as possible, so simple, in fact, that some, especially those who are not overburdened with knowledge of some of the hardened notions of 'mainstream' development economics may wonder whether I am not labouring the obvious. Policy specialists, as well as students and teachers and lay readers who have this difficulty and are hard pressed for time and eager to get on to policy prescriptions may, after reading the General Introduction, skip without loss chapters 1-3 and go straight to chapter 4, and then go on to chapters 5-10. If chapters 5-7 are again a little too condensed, so that more than one reading plus some supplementary background reading and—for economists, statisticians or physicists,—some improvised numerical or algebraic examples may be helpful. But chapters 8-10 are again very straightforward and almost self-contained. On the other hand, those who *do* have conscious or semi-conscious attachments to standard doctrines (especially the economists) may actually find that the major novelties of the present study in later chapters are easier to grasp than the intricacies and inadequacies of the 'old' development economics which are corrected or clarified. To escape from the prison-house of ideas of the 'old' development economics is more difficult than to grasp the new development economics if these are approached with at least a half-open mind.

Acknowledgements

My indebtedness is to too many with whom I have held discussions or whose works I have read in working out the approach presented here for the first time, for them all to be mentioned here. But the names of most of them are given later in this study. I am indebted most of all to my teacher the late Piero Sraffa, of Trinity College, Cambridge, and to Professor Ngo Manh-Lan for long discussions. Special thanks are due to Professor Ngo Manh-Lan for supplying me with valuable up-to-date material on the economics of education which are not easily available in India. My approach to problems of ethnocommunalism, of high importance at least in my own country, India and in all South Asian countries, owes much to discussion by correspondence with Louis Dumont of the Ecole Pratique des Hautes Etudes, in Paris. Formal and informal comments by all participants at the Regional Research Seminar on Perspectives on Asia's Future, at Unesco Proap, Bangkok (20-24 July 1987), have all been very carefully taken into account, in finalising this study and incorporating some new material which was first presented and discussed there. Of course, no one except myself is responsible for the views expressed.

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4 August, 1988

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GENERAL INTRODUCTION

Mainstream development economics is now over 40 years old (its year of birth can be almost exactly dated as 1943)[1]. Its offshoot, the economics of human resource development (with the focus on the economics of education) is younger : about 20 years old)[2].

As often happens when people approach middle age, mainstream development economics is in trouble. There are fears that 'with the revival of neoclassical economics' mainstream development economists are being ruled out of court apparently because they really have nothing to say or to paraphrase Ludwig Wittgenstein slightly[3] . . . 'what they cannot speak about they must pass over in silence'. (For an expression of such fears, see Sen (1983a, 1984, pp. 485-89). Another stricture, meant to sound less severe, is that in this subdiscipline of economics, 'too many questions were asked', including some to which there were no answers, and not many answers were given (see Basu (1985) preface). The kindliest verdict seems to be that 'the real limitations of traditional development economics arose not from the choice of means to the end of economic growth, but in the insufficient recognition that growth was no more than a means to some other objectives' and that therefore 'the time to buy (it) has not yet arrived' Sen (1983a, 1984, p. 495).

The plight of the economics of human resource development seems to be worse. Furious debates about the validity of manpower-forecasting versus rate of return measures of the 'productivity of education', and whether these rates of return measure 'productivity of human capital' in any sense seem to have created a deadlock (see Blaug (1984) and Carnoy (1985) for recent contrasting views : also Sen (1964), Sen (1966) for the start of the debates).

Yet, there have been bold new initiatives to keep development economics afloat. Always stronger on strategy and policy than on theory, it is now grappling hard with issues of theory. Sen's defence of development economics is grounded in the progress made in reorientation from growth per capita per se to poverty eradication, to fulfilment of basic needs, further to increased entitlements, and on to fulfilment of capabilities of the poor—as regards the objectives of development (see Sen (1983a, 1984) and Sen (1983b, 1984) for resumes). The issues of development economics are being re-examined within the framework of Walrasian general equilibrium theory e.g., Basu (1985), ch. 2, ch. 4 ; Chichilnisky (1980)—sometimes to reach new conclusions (as by Chichilnisky—on which more later). A startling innovation is the discussion of the 'Political Economy of Investment in Human Capital' with the aid of Rene Thom's mathematical catastrophe theory by Irma Adelman and Jairus M. Hihn (1983). Perhaps the first attempt to discuss problems of economics (and politics) with the aid of this little-known theory, the scope of the paper is much wider than suggested by the title. There are other innovating initiatives. Baumol (1986) in a recent tour de force about the 'possibility of continuing expansion of finite resources' challenges prevailing conventional wisdom about 'exhaustible natural resources', which has major implications for the economics of development. Earlier Baumol (1967) in exercises in what he ironically refers to as 'Baumol's disease' theorises on matters which are of increasing concern to development economists, viz. externalities and urban blight, the intrinsically 'non-progressive' nature of teaching activity (in the sense that the teachers' labour productivity or output per man-hour is and must always be indivisibly constant), while there is 'unbalanced growth of the progressive sectors' (where productivity increases), growth of amateur activity from dramatics to home cuisine, furniture-making etc. Akerlof (1976), borrowing notions about caste from Hutton (1961)—which ought to be modified in the light of extensive researches by Dumont (1966, 1980) and Dumont (1986) as well as Buhler (1886, 1984)[4]—has, probably for the first time, introduced an analysis of the economics of caste and caste equilibrium which, it is conjectured (see Basu (1985) p. 179) 'may lead (an) economy into a low-level equilibrium trap'.

The above-mentioned represent fragments of a new approach (or approaches) to development economics. Leibenstein's attempt (1978) to apply a general X-efficiency theory to problems of economic development is, in principle, a full-scope new approach which discusses almost everything of concern to mainstream development economics from a new angle.

On the other hand, adaptations of Piero Sraffa's commodity production theory to discuss themes in development economics (see Bose (1975) chs. 9, 10, 11, Bose (1984a), Bose (1984b)), Bose (1985), Braun (1984), Filippini, Scanlon, Tarantelli (1983) have so far been made to discuss somewhat narrowly specific rather than general themes in development economics. However, it is worth exploring how far an adapted, extended (and corrected) Sraffa-type macroeconomic political economic model can shed some light on some key issues of development economics. In this study, I shall try to do so for three main reasons.

First, it is surprising, but true, that a realistically relevant, complete, and logically self-consistent macroeconomic model is not readily available today for subjecting the ideas of development economics to an acid test.

Secondly, the present writer's long experience since the early 1960's in working with Sraffa-type models makes him reasonably hopeful that they may serve the purpose.

Thirdly, it suggests a new way of looking at issues which are today in the forefront, having spread from the developed capitalist countries to the major 'underdeveloped' socialist countries (China and Vietnam which so describe themselves now), and, most recently, to the developed socialist country (the Soviet Union). Their impact on India, the largest among the world's more underdeveloped countries, was felt as the first moves towards an Indian-style 'New Economic Policy', inspired by Anglo-American 'supply-side economics' began to be made in 1984. This has been only tentatively and rather perfunctorily discussed in serious development literature so far, from which nothing ultimately emerges (e.g. in Chakravarty (1987) pp. 14-19, pp. 42-44, 77-80, there is a last-ditch Indo-Fabian apologia for India's 'socialist framework' as an instrument of planned development). This impact has become stronger recently, with admiration for Chinese 'modernisation' drives and Soviet 'perestroika' (or restructuring).

Sraffa's commodity production theory, after suitable correction (on the basis of his own original ideas in most cases) and extensions, provides guide-lines for reducing the state's powers, without, however endangering development processes by encouraging immanent urges to 'live beyond one's means' by accelerated production of what are identified as 'non-basics' and increased 'non-basic activities' in commodity production theory.

All these new approaches are welcome. For the development record shows that development economics is needed, and strengthens the case for rethinking rather than of rejection and requiem. In any case, even if underdevelopment does vanish (at least temporarily) from the face of the earth, the danger of a relapse into underdevelopment will probably remain. If today there are already such fears in such show-pieces of the world economy of the past as England, or now the USA, it may not leave unaffected for ever today's envied show-piece, Japan. The wolf of 'living beyond one's means' lurks outside every door.

CHAPTER 1

THE OLD DEVELOPMENT ECONOMICS : A CRITICAL SURVEY

1:1 *Themes*

Development economics has always been a loosely-connected set of themes rather than unified as development theory. Resistance to becoming a part of any 'monoeconomic' unified theory has been quite strong (see Sen (1983a, 1984) p. 487).

In the 1940's and 1950's, the major themes could be summarized as : (1) economic *stagnation,* which is to be *broken* through (2) rapid accumulation of *material resources* and (3) mobilization of *underemployed rural labour,* by (4) state *planning* directed by (5) an economically *activist state,* and underwritten by (6) a *world-wide commitment* to promote development in underdeveloped countries by *aid* and *trade,* while relying on (7) *trans-systemic features* of the development process which cut across differences in political and social systems[1].

In more recent years, the list of main themes has been filled out or been added to, or modified by (8) considering explicitly the aspects of income-distribution in favour of the poor, supply of basic goods for them, their entitlements and capabilities in the process of growth, (9) discussing complications connected with the aid/trade/technological dimensions of growth, recognising (10) urban underemployment (in the reported or unreported 'informal' sectors) persisting side by side with rural underemployment, stressing (11) the role of educational policy to raise productivity of unskilled labour and to increase the supply of 'human capital' embodied in skilled manpower. In addition, (12) the 'population problem' has remained under discussion in development economics, though seldom as a central theme (perhaps only with Nelson (1956) has it figured as a major theme in defining underdevelopment and working out a strategy of development).

How far the early major themes (1)-(7) have remained intact in more recent years, and how far they have been modified is partly a matter of opinion. Much noise made about (11) initially in the 1960's as a new idea in development economics was probably never justified (even if we overlook the 'deadlock' referred to in the general introduction). Though the terms 'human capital' and 'human resource development' came to be used later, and though he did guardedly refer to 'labour . . . (as) the only source of wealth' (p. 32) but also (confusingly) refer to 'wage goods' as substitutes for labour (p. 36)—Nurkse did propose a strategy of *converting* underemployed rural labour existing as a 'hidden savings potential' or 'human resource' into *material* resources such as earth dams and roads by first, making 'picks and shovels' by pure labour (p. 44) (see Nurkse (1953) ch. 2). Rosenstein-Rodan (1943) of course, treated rural underemployment as a deadweight to be eliminated rather than 'utilised' as unskilled labour. But he, too, proposed co-ordinated investment by the industrialising monopoly trust in 'the training and skilling of peasants' converting them into 'full-time or part-time industrial workers' (idem p. 248). In a sense, therefore, there was already a strategy of 'human resource development' contained in the wider original strategy of rapid accumulation of material resources. What *did* come only later was the clear-cut emphasis on 'human resource development' with the focus on education.

On the other hand, (8) is a later theme which was hardly in the picture initially, though Nurkse did make appeals to the 'progressive income tax principle' within the underdeveloped country and also on a world scale (idem pp. 78-80) on rather a low key. Later themes (9) and (10) have created some confusion about (8) and (3) as major themes in development economics, but not eliminated them.

1.2 *Stagnation*

In the beginning, the problematique of long-term economic stagnation in some countries, variously termed as being in the grip of 'vicious circles of poverty' (Nurkse), caught in a 'low-level equilibrium trap' (Nelson) (1956) or 'low income equilibrium' or as being 'international depressed areas' (Rosenstein-Rodan)—has been central to all versions of development economics. The words "underdevelopment equilibrium" appeared only as a generic term covering all these terms and has seldom figured in any seminal work.

Indeed, this is the differentia specifica of development economics, its raison d'etre, what made work on development economics intellectually challenging to economists, especially when it was thought that the majority of countries and populations of the world (south-east Europe was included in this group up to the 1950's) suffered from such stagnation.

This needs to be stressed, because of two reasons. First, since all versions *also* stressed them (3), viz., existence of rural underemployment as a 'hidden savings potential', there has been a tendency (most clearly articulated by Michal Kalecki (1968, p. 23 ; 1972, pp. 162-70) to make this the problematique of development economics. Second, those who stress anti-poverty themes (8) listed earlier, sometimes tend to lose sight of (1) or the problem of long-term stagnation. But if the problematique is simply one of 'uneven development' (some developing faster than others) general economic theory (classical and Marxian) discussed the problem ; even neoclassical economic theory never denied that there may be such a problem. Development economics justifies itself because there may also be long-term economic stagnation *without* rural surplus labour as (Nurkse (1953, ch. 2) explicitly allowed may be the case). It also justifies itself because there can be and there is a special case of 'uneven development' involving not short-term but long-term economic stagnation ignored by general economic theory of all schools or analysed defectively.

1.3 *Accumulation*

Rapid or accelerated accumulation of material resources has been the second major theme in development economics. It has been generally accepted, more generally in fact than either long-term stagnation or rural underemployment as major themes (Rosenstein-Rodan, (1943), Rosenstein-Rodan (1955), Rosenstein-Rodan (1961), Mandelbaum (1945), Dobb (1951), Dobb (1960), Singer (1952), Nurkse (1953), Lewis (1954), Lewis (1958)).

However, there have been, from the beginning, dissenting interjections (Viner (1950, 1953) ch. 6, p. 96). Objections have been that there may be special cases where rapid accumulation of material resources may not raise per capita output, while concentration on utilisation of labour and land will, or due to 'unfavourable climate or bad government' nothing will work. But other reservations have been more widespread, e.g. rapid capital accumulation, yes, but for the use of 'labour-intensive' (as against 'capital-intensive') techniques (e.g. Rosenstein-Rodan (1943) p. 254, Nurkse (1953) p. 45). Or, as a once-over spurt to 'get over the hump' rather than a high rate of accumulation of physical resources maintained forever to maintain continuous development, since capital-intensive development raises the costs and difficulties of maintenance of capacity of durable equipment (Viner (1950, 1953, pp. 96-7).

Does the prescribed rapid capital accumulation involve necessarily a strategy of industrialization? Implicitly (e.g. Nurkse (1953), or very explicitly (Rosenstein-Rodan (1943), Dobb (1951), Mandelbaum (1945), Singer (1952)) the answer given is : Yes. But here, too, there have been dissenting voices (e.g. Viner (1950, 1953), p. 97), and they extend to the 'general case'. However, Rosenstein-Rodan's early advocacy (1943) is qualified with an enigmatic statement : 'One might consider the industrialization of these countries as one chapter of agrarian reconstruction, or one might treat the improvement of agrarian production as one chapter of industrialization'. He adds : 'what matters is to remember that the two tasks are interconnected arts of one problem' (p. 245 nl) or, as Mao was to put it later 'walking on two legs'—which no one has ever denied. Besides, very few advocate 'industrialization with a heavy-industry bias'. The bias is very much there in Dobb (1951), Dobb (1960) and Mahalanobis (1955) ; but it is not there in Rosenstein-Rodan (1943), Mandelbaum (1945) and Nurkse (1953).

1.4 *Underemployment*

When the discussion began, almost without exception, the reference was to *agricultural* underemployment in underdeveloped countries to be utilised as a source of capital formation (e.g., Rosenstein-Rodan (1943), Dobb (1951), Nurkse (1953), Sen (1960), Dobb (1960)). Perhaps Lewis (1954) was the only one who claimed there was underemployment and surplus labour in all sectors of the economy, as a source of 'unlimited supply of labour at a subsistence wage' to be utilised for initiating economic development.

For a long time, the focus was on (i) whether there was in fact observable rural surplus in underdeveloped countries, (ii) whether there was any rational basis for expecting the existence of such surplus labour, and (iii) conditions which must be fulfilled (e.g. a freeze on food consumption or compensating food aid from food surpluses in advanced countries) to convert the 'hidden savings potential' into increased investment. Theodore Schultz (1964) raised objections and Sen (1975) and Leibenstein (1978) have been defending the concept of rural surplus labour in agriculture. Viner (1958 pp. 50-1, 77-8) has also raised objections. Very recently, attention has been paid to persistence of urban underemployment along with rural-urban migration and rural underemployment and theoretical explanations of the phenomenon (see Leibenstein (1978), Sen (1975), Todaro (1971, 1984), Basu (1985) for surveys and assessments of the debates). The interrelation between rural and urban underemployment is under discussion as a new problem standing in the way of utilisation of underemployed labour to promote development[2].

1.5 *Planning and State activism*

Development economics is one branch of economics where everybody recognises that there is *not* an either/or choice between the market or State to promote development. The market never 'rules'. It is a 'mechanism', as is also the State, through which a section of society (usually a coalition of classes each with their ideological 'passions' and 'interests') rules over others. Planning for development has to be undertaken by such a coalition through both the market and the State mechanisms, by an activist State directing the market. On this all the major trends within mainstream development economics are agreed, though they seldom talk of social classes and generally tend to emphasise 'an economically activist State' and de-emphasise the market, insisting that the activist State must 'guide' and the market be 'guided' (e.g., Sen (1983a, 1984)). Among those who try to say that neither the State nor the market should be over-emphasised are Datta (1952, 1957) p. 319 Balogh (1961) and Johnson (1962, 1984). On the other hand, Sen does insist on 'direct approaches' presumably 'bypassing' the market in some sense during famines (when food supplies flow *out of* the famine-stricken regions utilising the market mechanism) or for increasing life expectancy or raising literacy levels. Baumol (1967 p. 56) seems to widen the scope of such direct approaches to 'overrule the market'. Only Dobb (1960) seems to uphold all-embracing *centralized* planning for development by an activist State, but only by implication (pp. 7-12).

Until recently it was implied, rather than made explicit, that political authoritarianism by overruling the market would invariably promote development in socialist countries, but perpetuate stagnation in capitalist countries. Very recently a debate has started on this issue (see Tsuru (1983), Samuelson (1983), Bhagwati (1983) as well as Sen (1983a, 1984), Adelman and Hihn (1983)). It is now conceded that a politically authoritarian State in a capitalist set-up may also act as an economically activist State, 'guiding' the market in such a way as to promote economic development. A beginning has been made in discussing the related but *different* question : can a political democracy in a capitalist country also 'guide the market' to achieve economic development in an underdeveloped country ? Or can there be political democracy *only* when the problem of underdevelopment has first been eliminated by a development-oriented political dictatorship ?

1.6 *Aid and trade*

Both Rosenstein-Rodan and Nurkse proposed that a world-wide commitment to trade and aid should be a part of the strategy for economic development of underdeveloped countries. Foreign trade and foreign aid were regarded as involving essentially the exchange of goods in one time period or over several time periods. It was assumed that trade and aid geared to promote economic development would result in gains by both the underdeveloped and the developed countries, so that the world-wide commitment would be made and be adhered to. It was also assumed that the economically active State on both sides would guide market forces to make possible such a non-autarkic pattern of economic development.

However, Singer (1952), Bronfenbrenner (1955) and Prebisch (1959) articulated widespread misgivings about the feasibility of the Rosenstein-Rodan-Nurkse aid-and-trade optimism. But none of them implied that the choice before underdeveloped countries was either autarkic development or no development. Nor, strictly speaking, does Chichilnisky (1980). She warns against the possibilities and some of the conditions of 'immiserising development' i.e., when development is accompanied by worsening social welfare in the formerly underdeveloped country or in worsening condition of the low-income groups in the developed countries (while increasing welfare in the formerly underdeveloped cuontry).

Of course, the Prebisch (1959) thesis was the nearest approach to aid-and-trade pessimism as the polar opposite of the Rosenstein-Rodan-Nurkse aid-and-trade optimism. For years it inspired advocacy of import-substitution-based industrialization strategies (making the economy more and more autarkic until it became a developed economy) as the only way to promote development. But as was noted by Sodersten (1983) even Prebisch has revised his basic approach to provide for some limited export optimism (i.e., recognising some openings towards economic development by underdeveloped countries exporting to each other while practising import-substitution against developed countries). It has also been suggested by Basu (1985 pp. 54-5), that by heeding Prebisch's warning against hoping for primary export-led growth and switching to export of labour-intensive manufactured goods later (the ground having first been prepared by energetic import-substitution of manufactures), a formerly underdeveloped country can do better than by relying on import-substituting industrialization. (But Sen (1980 p. 81) warns against countries rich in mineral resources relying on such a strategy).

1.7 *Concluding remarks*

There is very little to be said about the remaining themes in the list presented at the beginning of this chapter.

On the *'population problem'* : population growth has never been regarded as an anti-developmental 'problem' in development economics. It has either been regarded as being irrelevant or as a potential asset in promoting development. Thus, Rosenstein-Rodan ignored the problem. Hans Singer (1952) was explicit that population growth is *not* an obstacle to economic development (p. 399). To Lewis (1954) population growth was explicitly one possible source of supply of 'unlimited labour' which could be utilised for capital formation and development. Nurkse (1953) advances two separate theses on the problem of 'population explosion', which in the last analysis are mutually exclusive (pp. 48-9). Since he says 'labour is the real source of wealth' and can be converted into durable physical equipment (provided food consumption does not rise immediately), for him even 'dynamic' persistence of growth of surplus population is not a liability but an asset for promoting economic development. However, inconsistently with this view, he also supports active measures for control of growth of population. Resistance put up by Sen (1983b, 1984) to the 'neo-Malthusian resurgence' (p. 524) is in the true spirit of development economics, and *not* an aberration, though the State in all underdeveloped countries seems to have become committed to coercive or incentive-induced population control programmes.

On *human resource development and education* : human resource development theory seems to have done no more than translate the case for 'welfare state' measures into the language of development economics. Its attempt to do more than this in working out a strategy of expansion of 'human capital' has only led to an unresolved controversy on the relative importance of investment in expansion of secondary educational facilities (strongly advocated by Lewis (1962) and Harbison and Myers (1964) and strongly opposed by Blaug (1984)) and of primary educational facilities supported by Sen (1966). The dispute is unresolved because of the deadlock over tests to be applied for settling the issue mentioned earlier.

As regards working out *trans-systemic strategies of economic development* cutting across differences in social and political systems, both Rosenstein-Rodan (1943) and Nurkse (1953) did this (the latter going so far as to recognise extraction of the agricultural surplus by Soviet collective farms and the Soviet 'iron curtain' as important instruments of the accumulation of capital in socialist countries). If anything, this 'trans-systemic' approach has become more strongly entrenched in recent years with appreciation of real-life models of economic development in socialist Eastern Europe and China on one side, and in capitalist South Korea, Taiwan and Hongkong, on the other.

In this chapter the major themes of development economics have been enumerated and elaborated. But mainstream development economics has always been in a hurry pragmatically to prescribe. So a critical survey should begin by trying to find out how far its main prescriptions have worked in practice. This is attempted in the next chapter.

CHAPTER 2

THE DEVELOPMENT RECORD

2.1 *Rough and ready tests*

Rough and ready development economics has its recipes best verified by rough and ready methods. Use of sophisticated methods is neither possible, nor likely to produce noticeably better results (pace Adelman and Hihn (1983) who do use sophisticated methods with some success). Fortunately, better statistics with wider coverage (for 170 odd countries) are now available than was the case when development economics emerged. Also, qualitative economic data which are not based on measured statistics are more available, and more reliable (fascist and socialist iron curtains, democratic disinformation, in-built pessimism or optimism of statisticians notwithstanding). But do they conclusively, or 'on the whole' approximately, establish that 'there is still much relevance in the broad policy themes which traditional development economics has emphasized' (Sen (1983a, 1984) p. 495) ? Let us take a quick look.

2.2 *Investment ratios*

Arthur Lewis in the 1950's had, somewhat rashly, but understandably, put forward something like a zodiac sign to be used for initiating development, viz., to raise the ratio of investment to national income from 4 or 5 per cent or less to 12 to 15 per cent or more (1954), p. 416. Understandably, because, if such a magic formula did work, if this was, indeed, the 'central problem in the theory of economic development' to be solved as he claimed, it would be the best possible news for underdeveloped countries, and would also establish the economics of underdeveloped on an indestructible foundation.

Unfortunately, the Lewis formula has not so much been refuted as been proved irrelevant. When he first put forward the formula, he had not stated very clearly the parameters he had assumed. In 1955 (Lewis (1955) p. 208) he repeated the formula, though more guardedly, making explicit that he was visualising nothing more than a 1% increase in national income per head to be achieved by this step-up in the investment : national income ratio. (Hans Singer, also suggesting earlier in 1952 that a 16 1/4 per cent rate of savings/investment was 'necessary' to achieve a 2 per cent 'rate of development per annum' (Singer (1952) p. 397)—had set his sights higher. But Singer had also hopefully assumed a population increase of 1 1/4 per cent which has turned out to be not 'realistic' as he hoped, but highly unrealistic. But data for rates of population growth 1970-78 for 184 countries are now readily available. Of these in 44 countries only was the population growth rate less than 1 1/4% (and only 11 countries were in the 'low income' category). Now the available data show that the Lewis recipe has been almost universally accepted : of 94 to 102 countries reporting, only 17 in 1960 and 5 in 1981 invested less than 12% of the national income (Meier (1984) pp. 230-33). But of 156 countries classified by OECD as 'developing', 63 had a growth-rate of per capita national income in 1970-80 of less than 1%, 80 had a growth-rate of per capita national income of less than 2% in 1970-80 (40 still had a decline in per capita national income). On the other hand, much more than half (93) were doing better than Lewis's 1% ; more than half (76) were growing faster than Singer's hoped-for 2% (see OECD figures quoted in Meier (1984) pp. 10-4).[1]

Perhaps for reasons just mentioned, the Lewis-Singer prescriptions have proved something of an embarrassment. On the issue of investment rates, the 'conventional wisdom' of development economics is now interpreted as prescribing some sort of an 'investment-rate maximisation' strategy, to develop as much as possible (given the low levels of incomes as the starting-points, especially in view of population growth at higher rates than visualised earlier) and as fast as possible (see Sen (1983a, 1984) pp. 491-92). But if we pick out the top 5 countries and bottom 5 countries among low income countries, list them in descending order of growth-rates, and then write down their ratios of domestic investment as % of the gross domestic product in 1960 and 1982, we get Table 2.1.

TABLE 2.1

Country	*Growth of GNP per head* (1960-82) (1)	*Gross domestic investment as % of GDP*		*Population growth rate* (%) 1970-78 (4)
		1960 (2)	1982 (3)	
China	5.0	23	28	1.6*
Pakistan	2.8	12	17	3.1
Kenya	2.8	20	25	3.3
Sri Lanka	2.6	14	28	1.7
Burundi	2.5	6	19	4.5
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Madagascar	−0.5	11	14	2.5
Uganda	−1.1	11	8	2.9
Ghana	−1.3	24	1	3.0
Niger	−1.5	13	26	2.8
Chad	−2.8	11	9	2.2

Sources : For cols. (1) and (3) : World Development Report 1984 (World Bank, Oxford University Press, Oxford) Table 1 (pp. 218-19). For col. (2) : World Development Report 1983 (World Bank) pp. 156-57 quoted in Meier (1984) pp. 230-33. For col. (4) : World Bank (n.d.) data quoted in Meier (1984), pp. 603-09. *Note* : The 1% investment ratio in 1982 was obviously unusual ; the 1981 ratio was more normal : 6% (see Meier (1984) p. 230).

If they mean anything, these figures show that neither among the top-ranking growth performers nor among the lowest-ranking growth performers among low-income countries do high growth-rates correlate with high investment-ratios. Also, the failures at the bottom of the list did not even *generally* show an increase in investment-ratios in 1982 compared to 1960 (three out of five did not). Nor can it be said that were it not for excessive population growth, the correlation would come out right. The population growth figures of col. (4), like the investment-ratio figures, display an irregular pattern.

TABLE 2.2

Country			*Share (%) in GDP*		
	of industry			*of agriculture*	
	1960 (1)	1981 (2)	1982 (3)	1960 (4)	1981 (5)
China	33	46	41	47	35
Pakistan	16	26	25	46	30
Kenya	18	21	22	38	32
Sri Lanka	20	28	27	32	28
Burundi	..	16	13	..	56
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Madagascar	10	14	15	37	35
Uganda	12	4	4	52	75
Ghana	10	12	8	41	60
Niger	9	32	3	69	30

Sources : For col. (1) and (2) : World Development Report 1983 pp. 152-53, quoted in Meier (1984) pp. 384-87. For col. (3) World Development Report 1984, World Bank and Oxford University Press, Oxford pp. 218-19. For cols. (4) and (5) : World Development Report 1983 pp. 152-53, quoted in Meier (1984) pp. 384-87.

2.3 *Industrialisation*

The record as regards the 'industrialization thesis' of mainstream development economics is no more reassuring. Available statistics are tabulated in Table 2.2.

There is no way of interpreting these figures to endorse the thesis. As we come down the ladder from the high growth-performers at the top to those at the bottom, we do not find lesser growth-rates correlated with lower shares of industry in GDP according to some uniform pattern (either in 1960 or in 1981 or 1982). The 1981 and 1982 figures have both been entered to underscore some violent fluctuations in the early 1980's affecting the bottom five more than the top five. It is true that shares in GDP of industry in South Korea 1960 (20%), 1981 (39%), in Hongkong 1960 (39%), 1981 (30%) and Singapore 1960 (18%), 1981 (41%) with very high growth-rates should not be ignored (nor the fact that high-income oil exporting countries of West Asia have an industry share of over 70%) (see Meier (1984) pp. 386). But they cannot overcome the weight of evidence of Table 2.2.

Of course, Singer had explicitly stated that by 'industrialization' to promote development he meant expansion of the 'non-agricultural sector' (which was to include commercial, financial, personal services etc.) (Singer (1952) pp. 384-86). He thought that starting with the share of agriculture in the national income realistically estimated at 40%, the ratio would be less with development (Singer (1952) p. 384). By this criterion, the higher the growth-rate the lower should be the share of agriculture in GDP in Table 2.2. But there is no such pattern either for the upper slab or for the lower slab of countries listed.

One final remark about the 'industrialization thesis' of development economics. The issue is *not* whether, when a country becomes fully developed, the share of agriculture becomes very small, while the share of industry becomes large, while the share of services becomes very large. They do, as we see from Table 2.3. This is true even for the best-known show-pieces of 'agriculture-based' growth listed in the upper half of the table. In fact, as can be seen by comparing the figures in the upper half and the lower half of the table, by 1981 as regards share of agriculture in the national income was concerned, countries which paid less attention to agricultural development, or, like the U.K. even 'sacrificed' their agriculture at the alter of the 'Industrial Revolution', were all the in the same league.

The issue is different : whether contemporary high growth formerly underdeveloped countries have been industrializing, while the low growth ones have not. Table 2.2 says there is no such pattern.

TABLE 2.3

Country	*Share (%) of GDP in*					
	Agriculture		*Industry*		*Services*	
	1960 (1)	1981 (2)	1960 (3)	1981 (4)	1960 (5)	1981 (6)
Australia	12	5	40	..	48	..
Canada	5	4	34	32	61	64
France	10	4	39	35	51	61
Denmark	11	4	31	32	58	64
USA	4	3	38	34	58	63
Japan	13	4	45	43	42	53
W. Germany	6	2	53	46	41	49
UK	3	2	43	33	54	65

Source : Meier (1984) quoting World Development Report 1983, World Bank pp. 152-53.

2.4 *Activist State, etc.*

What about the stress on State activism and trans-systemic possibilities and commitments ?

Recent experience draws attention to a reality not discussed (but also not rejected) by early mainstream development economics. This is the reality that capitalist 'hard states' which are one-party states with unelected but irremovable or elected and irremovable governments may emerge as high growth performers. This is now accepted as latter-day conventional wisdom by mainstream development economists, though the explanation is sought in an economic activism which interferes with and firmly guides the market, in egalitarianism, and high literacy which accompanies the dictatorship.

On the other hand, there does not appear to be any rethinking on the tacit consensus that a socialist dictatorship will ipso facto produce high growth. Doubts about the statistical indicators, expressed by both outsiders and insiders, seem to have been removed regarding the growth performances of People's China and the eastern European states, as were removed doubts about the performance of the Soviet economy earlier. Even the World Bank now seems to accept statistics from these countries which indicate high growth-rates (see Meier (1984) quoting 1970-78 data supplied by the World Bank, pp. 384-87). But for the 1970-78 period, negative growth rates estimated for Lao, Angola, Cuba by the World Bank (Meier (1984) pp. 384-87) and a low growth rate for Vietnam over the 1970-80 (of 0.5%) circulated by OECD (see Meier (1984) p. 12) seem to call into question the thesis that under a socialist dictatorship the economy will *always* grow at a high rate.

The world-wide trans-systemic commitment to promote economic development by trade and aid, visualised by Rosenstein-Rodan and Nurkse never materialized, though the quest has never been given up. Instead, strains and conflicts—inter-systemic (U.S. *vs* Vietnam, US *vs* Cuba are examples) as well as intra-systemic (over the exercise of the oil weapon within the capitalist world ; Soviet *vs* People's China, People's China *vs* Vietnam)—have scarred the development record over the past 35 years.

All in all, the development record does not assure us that the remedies for underdevelopment proposed by mainstream development economics have been working very well over the last three decades, in practice. Can it be that being in a hurry to prescribe, mainstream development economics slipped up on theory ?

CHAPTER 3

RETHINKING ON DEVELOPMENT THEORY

3.1 *Theory : how much, what kind ?*

The reputation for theory of development economics is not particularly high. For example, when young modern mathematical economists do take a look at it, they sometimes overlook the difference between von Neumann's high-brow balanced growth model and the model implied by Nurkse's low-brow 'balanced growth' doctrine which is that the former postulates an *equal* rate of growth in all sectors, while the latter postulates only growth in different sectors at *proportionate* rates determined by demand and supply elasticities (which are generally unlikely to be equal) (see Basu (1985) pp. 24-5 who does not make the mistake).

But mainstream development economics cannot dodge theoretical assessment on the plea that the theory underlying its recipes is yet to be worked out. It is literally studded (unless we join high-brow critics in saying littered) with ideas and concepts borrowed from English classical political economy (Adam Smith), or from Marx, Bentham, the Keynesians ('disguised unemployment'), Pigou (social marginal product distinguished from private marginal product), Marshall and Viner (external economies and diseconomies) etc. There is some attempt at originality, e.g. adapting the concept of 'disguised unemployment' (against Joan Robinson's caveat), of underemployment equilibrium, the concept of externalities,—to the novel theme of underdevelopment.

However, it seems to slip up in making these adaptations much of the time. There are experiments with *alternative* concepts and approaches which are *mutually exclusive* even at first sight. This in itself would not have mattered. Adam Smith is notorious for having done just this (e.g., on the theory of value, theory of land rent), and *also* Marx (though neither destructive critics nor pious defenders pay much attention to this, see Bose (1980) for annotated evidence and argument). Unfortunately, often the alternatives are left hanging in the air,

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or, what is far worse, it is found that *none* of them are true. There are also non sequiturs. Or a few special cases which do *not* add up to a general case or are prima facie not convincing as the main cases, are cited to establish a generalisation. Significant themes in processes of development are ignored by the theories. Straight answers to straight questions on the key issues are hard to come by.

The depressing picture just painted seems to be a true and fair picture of standard versions of mainstream development economics, even if, as noted in the Preface earlier, the quality of theorizing is much better in recent initiatives. In this chapter, a few examples of miscarriage of theory are selected for discussion to establish the point. Such examples exist : we *can* put our fingers on what is wrong, on the weak spots. For none of the standard versions represent theories about which Bertrand Russell could have written that he is 'unable to be sure of (its) rightness merely on the ground that (he) could not see any point on which it is wrong' (Russell (1922, 1961) p. xxii).

3.2 *Stagnation* : *vicious circles*

What are the causes of stagnation in underdeveloped countries ? Underdeveloped economics does not deny that the causes are multiple : economic, political, psychological, ideological ; internal ('endogenous', 'inward-looking', autochthonous) as well as external ('exogenous', 'outward-looking'). (It parts company with those who insist that there is no 'causality', no causation unless there is *one* cause, the prime mover, that any 'deterministic' analysis must necesarily be monocausal). But it tries hard to make the analysis of causes 'operational' from the viewpoint of working out a strategy of development by looking for 'proximate economic causes', behind which lie the ultimate causes, which are non-economic. The search is for a sieve or 'framework of analysis' through which the multiplicity of causes may pass.

One such framework of analysis was a neo-Keynesian aggregative one adopted by Nurkse (1953) : in terms of two interlocking 'vicious circles of poverty' on the 'savings and demand sides of capital formation' (with a low self-perpetuating per capita income as the element common to both circles, which made 'average rates' of both savings and investment low).

Does this mean that there is stagnation where all (or almost all) are *equally* poor, i.e. where there is egalitarian poverty? At one point, Nurkse answers : yes, by analogy with an *individual,* who is 'a poor man', like a person 'a country is poor because it is poor' (Nurkse (1953) p. 4). He adheres to this analogy generally in his analysis of the causes of stagnation. Even his adaptation of Duesenberry's intranational 'demonstration effect' of consumption patterns of higher income groups on the consumption patterns of lower-income groups to formulate a special theory of the pressure of 'international demonstration effects' of consumption in rich countries on poor countries is testimony,— is conducted in terms of average aggregate consumption and 'unequal income distribution in the world' (and not *within* the underdeveloped country) (pp. 58-68). But there are passages where Nurkse seems to concede that people in a poor country may be 'unequally poor', and the stagnation may be caused by low savings and investment by 'rich traders and industrialists' who purchase landed estates or contract debts to imitate advanced countries' consumption patterns (pp. 43, 69, 147-48).

Now, it is crucial to make up one's mind as to whether it is egalitarian poverty or inegalitarian poverty, or both which can cause stagnation. If it is inegalitarian poverty, or both types of poverty, which can do so, 'inequalizing' development efforts may merely perpetuate stagnation, may be at a higher level of per capita income than before. If, on the other hand, it is egalitarian poverty (which Nurkse refers to so often), any income-inequalizing development strategy will necessarily break stagnation, whether or not the 'rich get richer and the poor get poorer', in terms of absolute levels of income, property, etc. Here is an example, though a crude one, of two theoretical propositions, both of which cannot be true.

To be sure, 'revisionist' versions of mainstream development economics now tend to extol strategies of development which equalize incomes and property (e.g., Adelman (1974), Ranis (1974), Bergsman (1979, 1984), Jolly (1974)),—though Seers (1974) suggests that if pushed too far, such strategies may interfere with reduction of poverty and fail to maintain growth. Besides, as already noted in the Preface, the themes of income redistribution, of satisfaction of basic needs, of exchange entitlements, of enhanced capabilities in favour of the poor—have pushed their way to the front pages of studies in mainstream development economics. The themes related to sexual division of labour and house work, of 'co-operative conflicts' based on sexual and age-group divisions within the family are also receiving increasing attention (e.g., von Werlhof (n.d.)), and are being discussed within the format of this 'revisionist' development economics (see Sen (1985)). But, as Sen puts it, all this is considered as having revised ideas about 'the ends of economic growth' and 'not. . . (about) the choice of means' (Sen (1983a, 1984) p. 495).

Will inequalizing development strategies necessarily break stagnation or perpetuate it ? This question has not even been discussed. The Nurkse thesis of 'egalitarian poverty' as the cause of stagnation, implicitly accepted in Kuznets' 'inverted U hypothesis' about increasing inequality in early stages of growth (see Fields (1980, 1984) pp. 30-36)—remains unchallenged and univerified.

3.3 *Stagnation and externalities*

In an alternative approach found in mainstream development economics, the explanation of stagnation is not in terms of aggregative and neo-Keynesian analysis, but in terms of a disaggregated multi-sectoral format. Its main prop is the concept of external economies (see Rosenstein-Rodan (1943, 1960), (1955, 1957, 1961, 1984) pp. 361-65), Scitovsky (1954, 1960), Dobb (1951), (1960), Baumol (1967)).

In this approach, too, there are unresolved and largely undiscussed disputes about which *kind* of external economies are relevant in explaining stagnation (and finding a strategy to break it).

The dominant view seems to be that 'pecuniary' external economies are 'all pervasive and frequent', especially in underdeveloped economies, while 'technological' external economies, arising from 'direct' interdependence in production and consumption among firms and sectors, are not (Rosenstein-Rodan (1961, 1984), Scitovsky (1954, 1960) pp. 298-99). The exclusion of both from the profit and loss calculus of individual firms or investment units *acting in isolation* from each other is responsible for stagnation (but exclusion of the 'all pervasive' 'pecuniary' external economies do more damage).

However, Baumol (1967) asserts that 'pecuniary' external economies are on balance nil and cancel out and should therefore be ignored (p. 25n). On the other hand, there are elements of direct (i.e., 'non-pecuniary') interdependence among (most) production or utility functions ('only do-it-yourself activities may be entirely untainted by (such) interdependence effects' p. 26). Because any individual or small group 'acting in isolation' excludes such non-pecuniary (technology and utility-related) external economies, there are problems of 'socially sub-optimal' behaviour leading to social problems like failure to promote growth (as well as failure to reduce unemployment to eliminate inflation, provide education, prevent urban decline) (pp. 29-30).

What are we to make of all this ? If 'pecuniary' external economies do cancel out on balance, the Rosenstein-Rodan-Scitovsky argument (endorsed in essentials by Dobb (1951), (1960)) fails as an explanation of stagnation. For they insist that 'technological' external economies which are included in Baumol's 'direct interdependence' are rare and therefore of little consequence. *Do* 'pecuniary' external economies cancel out on balance ? Viner (1931, 1953) who first made the distinction between these two types of external economies, and is quoted by Scitovsky as having done so, pointed out that 'pecuniary external economies to industry A are likely to be internal or external economies to some other industry B' (p. 218), i.e., they *may* become the 'internal economies' to industry B, or they may not. But he seems to have in mind the possibility which is 'theoretically conceivable', that external economies to industry A may not become (internal) economies to any other industry, but become internal economies to industry A itself as it expands. Baumol's verdict that pecuniary external economies cancel out, is probably based on the reasoning that if they did not, i.e., if, when industry A expands, it does not generate pecuniary *external* economies for B or C, it would be because it converts the economies into its own internal economies.[1]

But if Baumol shoots down the Rosenstein-Rodan-Scitovsky argument by this reasoning, the latter take their revenge by shooting down the Baumol thesis that non-pecuniary 'direct' external economies are all pervasive and stagnation results from these being excluded from calculations. (In doing so, they can invoke the authority of Viner who said 'illustrations of technological external economies are difficult to find' (Viner (1931, 1953) p. 217)). By their arguments against each other, Rosenstein-Rodan and Scitovsky on one side, and Baumol on the other, seem to cancel each other out.[2]

3.4 *Stagnation, the State, and the market*

The language of external economies is not always used in development economics (e.g., Hans Singer does not)[3]. But whether it is used or not, an issue which keeps cropping up is whether price-signals of an unguided market (nota bene, whether the market is perfectly competitive or not)[4] spread investment pessimism and perpetuate stagnation in underdeveloped economies. In fact, if we rub out all references to external economies in the literature, the analysis is *not* in shambles. In most cases, an analytical structure *does* emerge : it is like archaeologists discovering the artefacts of an older civilization beneath those of an earlier one, at the same site.

If we excise the term in the writings of Rosenstein-Rodan, Dobb, Scitovsky, we find a common theme : the defective price-signals of the market, 'atomistic' or 'isolated', spread pessimism about investment and market opportunities and cause stagnation. (e.g. Dobb (1960) quoting Koopmans on 'secondary uncertainty arising from. . . . one decision-maker having no way of finding out the concurrent decisions and plans made by others . . . (which is) quantitatively at least as important as the primary uncertainty arising from random acts of nature and unpredictable changes in consumers' preferences' (p. 8)). (Scitovsky (1954, 1960) p. 306, p. 306 n.1, remains unshaken in his commitment to this argument, even after Arrow has pointed out to him that 'in a formal sense, futures markets and futures prices could provide exactly such a signalling device'—which Scitovsky faithfully acknowledges and records, but evidently rejects).

Nurkse, who first states his entire argument *without* using the term 'external economies' at all, (Nurkse (1953) pp. 5-14) is less sure that the main fault lies with the 'price system' or the 'market system' (as the other writers do). There is only a mild stricture that 'ordinary price incentives may bring it (i.e.

balanced growth) about by small degrees. . . . (which) slow growth is just not good enough' (p. 12). According to him, there is nothing inherently wrong with markets and prices, it is only that *lack* of simultaneous, synchronous investments in a whole range of industries, which could support each other, which weaken price incentives and create market problems. Once this is arranged, corrected price signals would emerge, there would be 'dynamic *expansion* of the market' (p. 13). Here the anti-market edge of the argument is blunted, though all agree that lack of planned investments synchronized horizontally and vertically, as it would be within a giant trust, is a key failure. On the other hand, at least sometimes, Dobb, and especially Baumol, seems to make the market mechanism itself as responsible for stagnation as lack of planned investment, wanting it to be 'overruled' (Baumol (1967) p. 56) if stagnation is to be broken, presumably on a *permanent* basis.

Admittedly, it is not easy to be sure *who* among these writers, and *when,* are calling for market-subversion rather than market-utilisation or market-contraction rather than market-expansion (though all these could be subsumed under the truth-obscuring rather than truth-revealing label of 'market guidance'). But can some forms of 'market guidance' cause stagnation independently of 'absence of planning', i.e. even when there is planning? If so, *what* kinds of market guidance do so? Even a hypothesis does not seem to have been framed on these issues as a problem of *theory* in underdevelopment economics. However, hastily improvised 'theorems' are sometimes invoked in discussing 'country experiences', e.g. market-*expanding* 'guidance' causes underdevelopment or retards development, *or* it is market-contracting guidance which does this (in the context of market-expansion and market-contraction being taken to be synonymous with relaxation or tightening of controls). But these are not proved theorems of underdeveloped economics.

Everybody agrees (i.e. Rosenstein-Rodan, Nurkse, Dobb, by implication Singer and perhaps most explicitly Baumol) that in planning for rapid development, the State has to play a role. So by implication they agree that *absence* of planning for development by the State is responsible for long-term stagnation. Planning is synonymous with State activism—is standard doctrine. But in discussions of Chinese and Indian planning experience, especially in the now extensive literature on their comparative performances, this standard doctrine has been under severe strain.

According to the criteria by which State-activist economic planning is judged, *both* represent cases of such planning. But stubborn questions have arisen as to whether since planning by the State began in these countries about thirty years ago, there is a recognisable problem of relative stagnation in one or the other country in agriculture or industry, or both, or even as regards per capita income growth-rates in the economy as a whole. These questions have been skirted or dodged in general appraisals of the economics of underdevelopment. They have been locked up in what are as yet black boxes in analytical underdevelopment economics labelled 'political complexities' (e.g., Sen (1983a, 1984a) sec. 5) or 'power realities' (e.g., Bardhan (1974) pp. 261-62).[4a]

However, the frequency and urgency of these questions have been increasing noticeably in recent years. Moreover, there are forebodings that in general problems of underdevelopment would be aggravated in the last quarter of the century, because world growth in the last quarter would be lower than in the third quarter, that the 'miracles' of the 'golden decades' of the 1950's and 1960's are over (see Samuelson (1983) p. 73).

Consequently, development economics cannot put off much longer systematic investigations as to why and how States committed to planning may, in the name of planning for development, engage instead in planning for underdevelopment.

3.5 *Resources for development : theory and policy*

Mainstream development economics has suffered much by borrowing untenable views about the roles of labour, capital and land in producing wealth and promoting development which have survived in the literature on general economic theory, despite several revolutions and counter-revolutions in the structure of theory.

Thus, there are in the last analysis two untenable views about the role of *labour*. One is 'that labour—direct (or 'living') as well as indirect (or 'dead' or 'embodied' or 'congealed')—performed in so many hours or days or years (man-hours, man-days, man-years) represents the only factor of production, or resource, which can be accumulated and used to produce wealth or promote economic development. The other is that labour is not a factor of production at all. Quantities of labour used in production can always be 'reduced' to, and so be replaced, or represented by quantities of 'wage-goods' (i.e., baskets of essential consumer-goods, housing facilities, and facilities of transport to and from work) on which workers subsist and reproduce. Ricardo is the most prominent exponent of the first view, and Leontief of the second view.[5] Marx experiments with both, using them interchangeably (for example in Marx's reproduction schemes v does double-duty, serving indifferently to represent hours of labour-time or as money-wages). But Marx also *repudiates* both, with telling arguments.[6] Sraffa (1960) in all his models of production with a surplus includes invariably and separately *both* labour-time and wage-goods required by workers for subsistence and reproduction (so that neither can replace the other). (It may be noted in passing, though it is not material to what follows, that there is an extraordinary tendency among modern mathematical economists to consider *both* views to be equally tenable. This apparently receives encouragement from such facts as (i) Samuelson, the inveterate critic of 'labour values' also worked out a version of the 'non-substitution theorem' where labour is the only primary factor, and (ii) Leontief, while entering labour within the production matrix as quantities of wage-goods, also (like Marx in his reproduction schemes) refers to these 'labour-coefficients' as if they were expressible in labour-time).[7]

Now, *both* these alternative untenable views about the role of labour appear in the literature on development economics.[8] What matters much more is that differing views on this point make different authors advocate different methods of utilising rural underemployed labour for accelerated capital formation and development. Perhaps what matters most of all is that these different methods have apparently been found to be unusable in practice, strongly suggesting that the fault lies with the untenable concepts of labour in the production process, to which they are related.

Nurkse (1953)—but *not* Rosenstein-Rodan and Singer—in working out his peculiar strategy for converting rural underemployed labour into capital, adopts an extreme version of the first view (let us call it the Ricardo-Nurkse view). Nurkse insists that labour *alone* 'starting from scratch' (i.e., without any tools and instruments or raw materials to assist labour) and *without* any increase in consumption (p. 38) must first produce essential instruments ('picks and shovels and hand-carts') out of thin air, and then use them to build a road or a dam in acts of formation of material fixed capital (pp. 44-5). Together with his explicit statement that 'labour, we are told, is the source of *all* wealth' (p. 32), his strong emphasis on the condition that there should be no increase in consumption (no 'leakages' from the potential surplus) (pp. 38, 40, 43) makes Nurkse perhaps the only modern economist who has actually applied for policy-making the Ricardian concept of labour as the only source of wealth.[9]

On the other hand, the alternative view, we shall call it the Leontief view, appears explicitly in the literature on development economics in the adaptation of the Harrod-Domar model of growth to construct a disaggregated multi-sectoral Leontief-type matrix (called a 'segmented economy') (Ahluwalia and Chenery (1974)). But it underlies the proposals of Lewis (1954), Rosenstein-Rodan (1943), Singer (1952). In so far as they want initial capital formation by employing formerly underemployed labour by paying the transferred labourers higher real wages (in the case of Rosenstein-Rodan also by providing transport and housing facilities) as incentives and/or compensation for harder work, their view is in stark contrast to Nurkse's who wants a ban on such increases in consumption until the process of initial capital formation is over.

Now, it is obvious that you can take a tolerant view of these foibles of theory only if you do not take them seriously. But if you do, it is obvious that the two views are mutually exclusive: moreover, they are both untenable. As Marx retorted to Adam Smith:[10] even those who made a living in Adam Smith's times by picking Scotch pebbles on the sea-shore (rather like dust-bin pickers in the streets of Calcutta and Delhi nowadays) needed 'means of production' like baskets, sacks and other containers for carrying pebbles. To adapt Marx's argument to discuss the Nurkse strategy: even rural underemployed labour building a road or an earth dam needs baskets, sacks, etc. to carry the earth, to say nothing of iron and wooden planks to make picks and shovels and hand-carts. A simple imaginary experiment also shows how absurd as a view of the production process the standard Leontief matrix is (provided it is clearly distinguished from and not confused with the Sraffa matrix). If stocks of leather, machines and baskets of wage-goods are *placed* inside Rosenstein-Rodan's shoe factory where the transferred formerly underemployed labour is to produce—*without any workers* also being on the scene—the production of shoes will be nil, even though the various physical quantities of leather, wage-goods, etc., can be multiplied by their standard prices to give what are wrongly called the 'coefficients' of materials and labour which, summed up, represent a line or process in a Leontief matrix. Thus *both* the Ricardo-Nurkse view and the Leontief view of the role of labour are untenable ; the first is rebutted by Marx's argument, the second by our thought experiment.

No wonder we find a summing-up of empirical findings as regards the conversion of rural surplus labour into material resources to initiate development which reads : 'disguised unemployment . . . has existed in many LDC's and . . . the prediction of low and stable wages have been borne out in many cases . . . But . . . quantitatively the extent of labour surplus has been exaggerated and there is failure to demonstrate large potential output gains from immediate reallocation of labour (i.e., of direct unassisted labour—A.B.) to . . . public works projects' (Berry and Sabot (1983) p. 154). May be the strategy based on the Ricardo-Nurkse view of labour has not worked because the view is inherently untenable.

As for the strategy based on the second, the Leontief view, which provides for *increased* wages and consumption, and not on a temporary ban on such increases : this too has not only been questioned on the basis of empirical findings, but the failure of the strategy has been analysed in various models of rural-urban migration and unemployment (see Todaro (1971, 1984), Leibenstein (1978), ch. 5, Basu (1985) chs. 5-7 for discussions). (Leibenstein (1978) criticises these strategies more deeply than others. He rejects not only the Ricardo-Nurkse view and the Leontief view of the role of labour but *any* view which fails to recognise that the *effort* of labour is a 'discretionary variable' in a pace-quality-time space (Ch. 2) whose use in production may be affected by the existence of 'inert areas of decision-making' and the power of non-economic reasons to reverse rural-urban migration when there is rising urban unemployment (ch. 5)). In this case, too, it is enough to explain the failure of the 'wage-incentive based' strategy to absorb surplus rural labour outside agriculture by rejecting the Leontief view of the role of labour in production, and acknowledging that it has proved to be false in practice.

3.6 *Capital accumulation*

There is a long-standing dispute in economic theory about the nature and functions of capital, identified as 'means of production, other than labour and land used in the production process, in relation to economic development. Does capital in this sense or rather the owners and managers of capital in this sense—*have* to act as a 'coercive social power' (Marx) to promote capital accumulation and development? Marx had no doubt that it *was* and *had* to be coercive under capitalism, whether the coercion was overt or covert, severe or mild, involving physical or simply mental coercion (or deception of rather than intimidation of the victims of such coercion). Marx laid special stress on the role of truth-obscuring economic apologetics in pacifying the victims of such coercion. With ruthless consistency, he argued that under socialism also, as long as it bore the 'birth-marks of capitalism' there has to be a coercive social power (represented by a social 'dictatorship of the proletariat') to maintain capital accumulation (see for example his Critique of the Gotha Programme). Engels, Lenin, Preobrazhensky (1926, 1965)—Engels and Lenin more than Marx, and the last-named most emphatically with his doctrine of a 'primitive socialist accumulation' to emulate capitalist 'primitive accumulation' which Marx discussed—elaborated Marxian views on the subject.

On this issue, mainstream development economics is in agreement with Marx. In fact, it is this agreement which is the main reason behind the commitment of all to regimes of State activism noted earlier. Nurkse is sure that to prevent increases in consumption *before* the break-through to continuous development *at all costs,* such coercion is essential ; so is Dobb. Hans Singer (1952, 1960) pp. 393-96 and Rosenstein-Rodan (1955,

1984) p. 364, differ from Nurkse and Dobb by providing for 'incentive' increases in real wages and incomes before the break-through. They insist, however, that 'mechanisms must be provided which assure that in the second stage (i.e. with a time-lag) the marginal rate of saving is much higher than the average rate of saving' (Rosenstein-Rodan (1955, 1984) p. 365). Even with optimistic assumptions about foreign aid inflow, Singer estimated that on certain 'realistic' assumptions a marginal rate of saving as high as 50% could get rid of foreign debt burdens in 13 years, a 'still high' rate of 20% (involving a 3 times rise from the estimated rate in a typical underdeveloped country in the early 1950s) would condemn an underdeveloped country to carry the burden for 53 years. It is obvious that such sharp increases in the marginal rates of saving cannot be achieved without coercion.

Despite this unanimity on the necessity of coercive capital accumulation—which extends to include exponents of neo-Marxian development economics like Paul Baran (1957) ch. 8, sec. 3—there are two outstanding issues.

First, Dobb, Nurkse, Baran do not say anything on this point, but Rosenstein-Rodan and Singer do stress that 'milder methods must be used . . . than in the nineteenth century' (Rosenstein-Rodan (1943) p. 248) and Singer wants 'strong arm methods' to be avoided (Singer (1952) p. 389), by giving incentives both to farmers and to the non-farm population. In other words, they want a policy to be adopted by which the bitter pill of coercion is sweetened with incentives. But what if the sweetening goes so far that the pill has no effect, or it is so little that only the bitterness remains ? Both kinds of problems have been encountered in practice, in the Soviet Union, in China and in India. But there has been no discussion at the level of theory in development economics to tie up these loose ends.

Second, whether or not these loose ends can be tied up, *is* there an *alternative* to *coercive* capital accumulation either under capitalism or under socialism which will promote development where there is underdevelopment ? Can there be such a thing as capital accumulation which is non-coercive but will still promote development ? As matters stand, the question is verboten, a nonsense question, an attempt to square the circle etc. But no 'impossibility theorem' has been proved on the issue. It should be re-examined, even though it does require going back to the first principles of development economics.

3.7 *Land and development*

Acceleration of accumulation through extraction of the 'potential agricultural surplus' is a major theme in development economics. It is closely related to the theme, already discussed earlier in this chapter, of mobilising the 'hidden savings potential' of underemployed labour in agriculture in densely settled or 'over-populated' under-developed countries. But, as Nurkse makes it clear, it is a sine qua non of accelerated accumulation also in sparsely populated areas (see Nurkse (1953) pp. 53-4).

Unfortunately, on the primary question : *what* is the agricultural surplus ?—untenable ideas have sometimes been explicitly endorsed and seldom repudiated.

Can the agricultural surplus be estimated as an 'own rate of surplus' or excess of 'corn output' to 'corn input' in agriculture (the latter being equal to seed corn, plus subsistence consisting entirely of corn of peasants and farm labourers plus corn used as feed for draught animals) ?

The notion goes back to the physiocratic produit net, and Ricardo's experiment with the idea that the 'corn ratio' fixed the rate of profit in all sectors of the economy. But is it correct ? The 'corn surplus' like, say, the 'cloth surplus' or the iron surplus in any economy, underdeveloped or developed, is an economy-wide *social surplus*. It is the surplus of corn or cloth or iron output less corn, cloth or iron consumed or used up as means of production not only in agriculture, the textile factories and iron foundries, but in all sectors of the economy. As it cannot be assumed that peasants and agricultural labourers in an underdeveloped country buy insignificant quantities of cloth or cement or iron produced outside the farms, the 'own rate' of corn surplus would be far in excess of the social rate, partly because some constituents of the composite 'corn' commodity would not be consumed within agriculture (being industrial raw materials) and partly because of other constituents such as foodgrains, not an insignificant but a significant proportion would be sold outside agriculture even by self-employed peasants (if there is significant differentiation of the peasantry as there is almost always likely to be).

One reason why 'draconian' procurement drives against the Soviet collective farms in the 1930s or against their counterparts in China during the Great Leap Forward or famine years 1959-61, were persisted in despite falling output or famine may have been that the marketable surplus procurable from agriculture was wrongly estimated because of confusion between the 'own rate' and the social rate of surplus. At any rate, there *are* models in the literature where the 'own rate' of corn surplus is identified as the agricultural surplus (e.g., Dobb (1954, 1955) pp. 141, 152). They do not seem to have been discussed or corrected.

On the other hand, lack of *any* theory of land rent in the basic texts (Rosenstein-Rodan, Singer, Nurkse, Dobb et al. make no reference to land rent) and wrong concepts of land rent which are sometimes used quite casually per force in other writings on development economics, give wrong ideas both about what can and should be done and what cannot be done in the matter of 'surplus extraction' from agriculture.

Because land rent under capitalist market relations is not conceived as capitalist ground rent but regarded as 'feudal rent' earned as a tribute extracted and paid by landlords, once private landlordism is abolished, it is assumed owners of land or those who occupy 'owner-like' holdings with occupancy rights earn no land rent. But this is wrong. Under capitalism, even after the abolition of private landlordism or even state landlordism, capitalist landlords who only employ hired labour, kulaks who manage or work along with hired hands—all earn rent. Under socialism, too, in so far as uniform input and output prices rule not only private plots (whether they are predominant as in Poland or not), but also co-operative and collective and state farms earn land rent. Sraffa's theory of land rent, rendered valid after corrections to remove Ricardian errors makes all this clear (see Sraffa (1960) ch. 9, Bose (1980) ch. 13, Bose (1984a), Bose (1984b), Bose (1985)). The 'Ricardian errors' are to assume that (i) there is always 'marginal' zero rent land or the 'worst land' which earns no rent (it can be verified that with this assumption an economic model involving the use of land cannot be worked out; in any valid model there is positive land rent being earned in all types of land), and (ii) lands can be ordered in terms of their natural properties as more or less 'fertile' or productive (this is impossible, 'good' lands and 'bad' lands change places when different levels of prices, profits, wages are considered). Sraffa's theory of land rent corrected for these errors has some implications for strategies of 'extraction of the surplus' which cannot be ignored and will be considered later. Suffice it to note, at this point, that it is regrettable that though development economics has lately been paying attention to usury (e.g., Basu (1985)), the standard assumption still seems to be that land rent is so well understood that it need not even be mentioned!

3.8 *Conclusion*

The criticisms made in chapter 2 above suggest that long-term indicators of the 'development record' reject the views of the old development economics about processes of underdevelopment and development. Those of this chapter suggest that weaknesses of theory, failure to work out the underlying theory of underdevelopment successfully, may be responsible.

But we cannot do without development economics as a special 'subdiscipline' of economics for at least two reasons.

First, according to a 1982 review by OECD of the real growth rate per capita 1970-80 (Meier (1984) pp. 10-14)) of 156 countries whose reports were taken into account—40 had less than 0% growth, 63 had less 1% growth, 80 had less than 2% growth, 103 had less than 3% growth. So, even if we set our sights as low as Hans Singer or Arthur Lewis did in the early 1950's, economics simply cannot play the ostrich and abandon all attempts to have a theory which explains the problem and suggests remedies. All the more so if we take seriously the sombre prediction quoted earlier that world growth in the last quarter of the 20th century will be lower than it was in the third quarter. (Not only those who agree with Samuelson's theories but also many who do not, hold similar views).

Second, we cannot optimistically and confidently rely on strict fidelity—more strict than is found, say, in Nurkse or Dobb or Rosenstein-Rodan—to the basic ideas in Physiocrats, Adam Smith, David Ricardo, Karl Marx or Vassily Leontief to do better. In other words, we cannot hope to solve the problem by a 'return' to the first principles of different types of general economy theory whose insights may have been misunderstood or been distorted by authors of development economics. For example, an eager re-reading of The Wealth of Nations shows that Adam Smith *did* (in Book I, ch. III) make lack of transport facilities (especially by 'water-carriage') the single most important cause or 'determinant' (as Nurkse rightly said in criticism (Nurkse (1953) p. 18 n. 1.) of underdevelopment. We can, of course, agree—and the development record confirms this and neither Nurkse nor anybody else has denied this—that the transport bottleneck may be *a* cause of the limitation imposed on development by what Adam Smith called the 'extent of the market'. But, as Rosenstein-Rodan (1943) p. 252 said on this point, *how much* it matters differs from country to country, and by no stretch of the theoretical imagination or a reinterpretation of the statistics of underdevelopment can one agree with Adam Smith on this point (even though modern advocates of *pure* export-led growth models do, on this point implicitly, follow Adam Smith). On the other hand, going back to more puristic interpretations of, say, the physiocratic Tableau economique, or Ricardo, or Marx will, for reasons some of which have already been noted above, probably make us put our feet into bigger pitfalls than those to be found in versions of development economics partially inspired by their ideas.

There seems to be no alternative available to trying out changed approaches to go *forward* from development economics, and *not* backward to pre-development economics, to come to grips with the problematique or the curse of underdevelopment (for curse it is, at least for those who are its victims).

To make such a fresh start, we may take a leaf out of the book of development economics and improve on it. However simple-mindedly development economics has been 'model-building' economics—whether the models are 'verbal' (e.g., Nurkse's) or numerical (e.g., Singer's), or geometrical (e.g., Sen's) or algebraical (e.g., the Mahalanobis models). Can better models of underdevelopment be constructed than *its* models, or those models which are available in general economic theory, but cannot explain or do not explain underdevelopment ? This must be explored before we throw up our hands in despair and assume that all model-building should be abandoned.

This is what we try to find out in the next few chapters.

CHAPTER 4

A MODEL OF ECONOMY AND SOCIETY

4.1 *Introduction* : *Sraffa-type models*

As already indicated in the general introduction, the theory of our changed approach is Sraffa's commodity production theory, to be used more comprehensively than it has been used so far, to discuss issues of underdevelopment and development, starting with a re-examination of the causes of long-term stagnation.

Sraffa's theory is 'model-building theory' if it is anything as is, we have noted, modern development theory. Sraffa-type models of an economy have already made an entry into development theory. But if this entry is to become the thin end of a wedge, some of its potentialities, so far unsuspected, will have to be exploited. Some corrections will have to be made. Many more features of these models have to be used to shake out conclusions relevant for development economics than have been done so far. In doing so,.not only a recently increased volume of published materials, but also hitherto unpublished results of vigorous on-going research, will be taken into account.

On this basis, we can enumerate a number of claims about the real-life features of an economy and society which Sraffa-type models, corrected and extended in this way, can handle. These are listed briefly in the rest of this chapter, and are interpreted to discuss problems of underdevelopment and development in the next few chapters.

4.2 *Surplus, but not of all commodities*

In Sraffa's own original system, it is stressed that a system of production with a surplus, must produce a social or aggregate surplus in physical terms of at least one commodity and a deficit of none. The implication is also stressed, with a numerical example, that in such a model, the aggregate surplus of some commodities may be zero (Sraffa (1960) pp. 5 n.l, 6-7). This is better known as the Hawkins-Simon condition in Leontiefauthored Input-Output economics (see Leontief (1986) pp. 25-6), but is sometimes overlooked, with the 'non-negativity condition' being interpreted to be an all-positivity condition. The difference is crucial, as we shall soon see, if some necessary extensions of Sraffa-type models to make them conform to real-life conditions are to be made successfully.

4.3 *Labour, wage-goods and material means are all indispensable*

In a Sraffa-type model of production with a surplus, labour-time, wage-goods or subsistence *materials* and material means of production are strictly distinguished, and all are regarded as being *indispensable* and 'irreducibly' present in any process of production. Production by 'labour alone' with workers living on air, and unassisted by material means of production (raw materials, machines, buildings) is considered impossible, as is considered production 'unassisted' by baskets of wage-goods or other material means. Even if we take note of fully automated modern processes where 'living' labour and wage-goods are not used, such processes are themselves directly or indirectly produced by all three. So the Sraffa view cannot be faulted as being unrealistic for a system of interdependent production, which, again, is recognised realistically as an inescapable view of real-life production processes. (The neoclassical 'one-way avenue that leads from 'factors of production' to 'consumption goods' is, of course, emphatically rejected in favour of a 'circular view' of the system of production and consumption which goes back to the physiocratic Tableau e'conomique (see Sraffa (1960) p. 93), as being the more realistic and also as analytically more fruitful). Thus, contrary to what some interpreters of Sraffa models have claimed, in these models, neither pure labour, nor wage-goods as proxy for labour are ever the *only* sources of wealth and surplus ; but labour is always *a* source, as are wage-goods and material means of production.

4.4 *Land and production*

Sraffa models are also irreducibly models incorporating 'unproduced' land along with produced means of production and labour in the process of production. Of course, as already noted, Sraffa's own handling of land suffers from Ricardian defects which have been corrected. Of these, one is the limitation of the use of land only to agricultural processes (which is not defensible on grounds of realism, since *any* production *and* trade need space, and is analytically quite unnecessary). Another defect—which makes it impossible to find solutions to Sraffa-type production equations with land without making arbitrary assumptions (see Abraham-Frois and Berrebi (1976, 1979) p. 99 who make such assumptions to derive their results),—is the assumption that there is always in use zero rent land. This too is wholly unrealistic, apart from being analytically counter-productive. Even self-employed owners of small pavement stalls in overcrowded Calcutta streets who sell consumer goods, pay an economic rent as licence fee to the civic authorities or bribes to the police. It is worth noting that Leontief, whose input-output tables ignore the use of land conceded that, though 'invisible' there, it is 'ever present' in reality (Leontief (1986) p. 91). A hundred years after Marx, and 164 years after Ricardo (who died in 1823), it is time to get rid of, not the assumption of positive land-rent in all production, but the Ricardian assumptions against which Marx chafed but could not get rid of. Sraffa-type models with the necessary corrections would fill an yawning chasm in the models of development economics. (On a related issue, also, Sraffa-type models clarify understanding. Earnings on buildings are like earnings on used machines and are not to be confused with ground rent even though in commercial practice both are clubbed together as rent).

4.5 *Labour is heterogeneous*

Sraffa's assumption of homogeneous labour—which Ricardo, Marx and Leontief all make—is a crying unreality. It can be removed by incorporating in the model different kinds of skilled labour or trained labour 'produced' in factories as joint products, along with the material products they help to produce (e.g. Bose (1975) pp. 113-15, Bose (1980) pp. 107-09; see Filippini, Scanlon, Tarantelli (1983) for another way of picturing heterogeneous labour 'produced' in factories in Sraffa-type models). (The method adopted highlights 'learning by doing' but also incorporates on-the-job training, the 'skilling' of labour in educational institutions which were stressed by Rosenstein-Rodan but not spelt out, and ties up with the economics of education which emerged largely as a by-product of development economics).

4.6 *Labour endogenously produced in households*

Labour can be and is 'produced' also in households or families as 'raw', unskilled and illiterate labour in underdeveloped countries, whether the families also produce material goods or not, and are classified conventionally as 'household enterprises' or not. There is no reason why this reality should not be captured in suitably extended Sraffa-type models. Sraffa, like Ricardo, Marx, Leontief, and also the hitherto published Sraffa-type models, does include primary 'unskilled' labour as exogenously given 'from outside the system of production'. But there is an anomaly in his method of treating both land and labour as 'given from outside the system of production exogenously' but *singling* out lands for mention as 'being employed in production . . . but not themselves being produced' (Sraffa (1960) p. 74). The anomaly can be removed by recognising that families produce raw labour. This will also tie up with family planning activity as economically and socially significant activity, not to lay the Malthusian phantom, but to remove restrictions on the fuller realisation of the capabilities of women in underdeveloped countries (see Sen (1985) p. 217). In any case the Malthusian phantom has been challenged in an unprecedented manner recently by the availability of the birth-control pill. This also makes obsolete the panicky, inequality-creating penally-imposed draconian one child family norms as 'population-control' measures still in force in China (though I understand they are likely to be abandoned after a decade). It also makes obsolete the outrageous, political-crisis-inducing forcible sterilisation drives in India during the infamous 'Emergency' during the late seventies.

4.7 *The transport sector can be incorporated*

As we have noted in chapter 3, there is a controversy in development economics about the role of transport. (The controversy was not only academic. The Bombay Plan of development drawn up in India by leading Indian industrialists, most of whom later became architects of the top 'monopoly houses' in India, during the Second World War, could be criticised, and was criticised at the time for saying in effect, as Rosenstein-Rodan put it : 'Let us build railways, roads, canals, hydro-electric power stations, the rest will follow automatically' (Rosenstein-Rodan (1943), p. 252). Sraffa himself does not incorporate a transport sector. Nor does it seem to have been incorporated in any published Sraffa-type model so far, though it has been noted that 'the joint production models of commodity production theory can cover such features as trading transactions and transportation' in real-life economic models (see Bose (1980) p. 109). Sraffa-type models of joint production can be used to cover railway, road-transport and air lines, with used rolling-stock counted as joint products along with the goods transported. As for the building of roads, bridges, railways, etc.—these can be accounted for in the model in the same way as machine-producing sectors are. There is no insurmountable problem standing in the way of extending Sraffa-type models in this way. There is one peculiarity which deserves special attention. Some of the inputs of, say, railway transport will be goods at the factory gates which enter railway wagons. The *same physical quantity* of each good will necessarily emerge from them as 'transported' goods. It will be the same with the aging locomotives, etc. Thus, with transportation taken into account, we would necessarily have Sraffa-type models with the quantities of pretransported goods being necessarily equal to quantities of the same goods post transport. Also, as the wagons and locomotives will last longer than one period of production, there will be equal quantities of locomotives or wagons of the same vintage appearing on *both* sides of the production equations so that the social surplus of these dated commodities will be zero (except for processes involving the use of brand new locomotives or locomotives on their final run before they are sold as scrap).

4.8 *Trade : Internal and foreign*

In Sraffa-type models there is always exchange and marketing even when the locus is on the use of land and for convenience, only one produced good, which is also the consumption good, is under consideration (see Bose (1980) p. 121). But, following an old classical convention, there has never been, so far, an attempt to take into account *specialised trade* mediating such exchange. This is fully in line with the strange convention by which Ricardian models of international specialisation in production are always referred to wrongly as models of 'international trade' (even though processes *producing* cloth and wine for example are assumed to make *direct exchanges* without any specialised trade). (The convention is observed also in modern neoclassical theory of 'international trade' since in this approach, by definition, there is no distinction made between production and trade, both being taken to involve allocation of factors. In neoclassical economics, whether such allocation is made in one time-period or is 'inter-temporal', is of no interest : a matter of unimportant detail. So also, it does not matter whether the production process is taken to stop at the factory gate or involves also sales and marketing efforts.)

But commodity production theory does not have to follow this peculiar convention. Specialised trade can be shown by considering processes in which equal quantities of goods enter as pre-traded goods, and emerge as traded goods. Such processes representing specialised trade can mediate exchange within a national economy, in which case they will figure in models of 'national economies'. Or they can be written into models of the world economy in which they mediate international exchange between 'sub-systems' of the world economy whose exports and imports represent 'regional pools' of cross-country demands and supplies (whether of one or many goods, usually the latter). For the device of 'sub-systems', see Sraffa (1960) appendix A ; for the concept of 'regional pools', see Leontief (1963, 1986) p. 130. (Only on the unreal, and unnecessary assumption of a one-to-one correspondence between countries and commodities they produce, can the world economy be pictured like an economy without sub-systems as in Braun (1984). More extensive elaboration of the use of Sraffa-type models in analysing the implications of international specialisation, trade and development can be found in Bose (1989) ch. 2, sec. 2.2 and ch. 3, sec. 3.3. The aberrations of theories of 'absolute' and 'comparative' *natural* advantages and the question of empirical verification of such models are also discussed there.

4.9 *Basics and non-basics*

If not in development theory, in the literature on planning for development (e.g., in India going as far back as the documents of the pre-independence National Planning Committee), a distinction has always been made between 'basic' or 'key' sectors (usually industries) and the rest, and also to 'core' sectors within the 'basic' sectors, etc. In commodity production theory, 'basic' sectors are precisely conceptualised as those whose products called 'basics' enter directly or indirectly (in either case the links may be singular or multiple) into the production of *all* commodities of the system. Though examples usually given refer to raw materials, machines, etc., a fine point often overlooked is that Sraffa insists that 'necessaries . . . are essentially basic' referring especially to *wage-goods* (Sraffa (1960) p. 10). Thus, on this view, not only the typical examples, viz. iron and steel, coal and petroleum, machine-tools, and now some electronic products, but also all so-called 'mass consumption' items are 'basics', and units producing them belong to the category of 'basic sectors'. 'Core' sectors are the basics which *directly* enter all or more sectors than do the indirect basics or they enter directly or indirectly more sectors than do the others. The linkages may, of course, be backward of forward linkages or both (a matter which has been stressed by Hirschman (1959) in pushing the case for a strategy of 'unbalanced growth').

Of interest also for development studies are the 'non-basics' conceptualised in Sraffa-type models as non-essential *luxury consumer goods* (these may be called 'pure' non-basics) and those non-basics which are *producer goods* which, however, enter directly or indirectly into the production (as raw materials or machines or buildings) *only* of luxury consumer goods.

The ramifications of such producer non-basics may be very wide and thick indeed. A fine but relevant point made by Sraffa is that with joint production, a pure non-basic (e.g., expensive perfumes consumed only by the very rich) may be jointly produced along with an important producer basic (e.g., chemical fertilizers used to produce food-grains consumed by the masses) (Sraffa (1960) p. 50). Development economics has often been groping for the concept of non-basics in the sense of Sraffa, e.g., in discussing why import-substitution strategies may impart development impulses which peter out,—without finding it.

4.10 *The concept of capital*

One can, in deference to an almost universal convention, and so as not to appear eccentric, refer to the material means of production as capital : 'circulating' (raw materials) and 'fixed' (machines and buildings). Sraffa who apologetically refers to raw materials invariably as 'means of production' and not as circulating capital, gives in by referring to 'durable instruments of production' more often as 'fixed capital' (see Sraffa (1960) chapter 2, p. 9 and chapter 10, p. 63, also chapter 6, p. 38).

But semantics apart, conceptually it is quite impossible in Sraffa models to refer to quantities of a factor named capital for which a price called profit has to be paid to the owners of these means and instruments of production *in addition* to the prices of these means and instruments. (To do so would mean counting these means of production and instruments twice and making *double payment* for them. For example, the input of raw cotton in making cloth is already paid for in the purchase price of the cotton, why should the owner of the textile mill also claim payment for its use in the form of profit on the quantity of raw cotton used up in production ?).

There is a second issue of capital theory to which Sraffa drew pointed attention (in the references given above, and also in a rejoinder to Harrod (Sraffa (1962) and in a reference to the reswitching of technique in Sraffa (1960) chapter 12)). The problem is that the same collection of means and instruments of production unchanged as regards the physical quantity of each item in the collection, may represent different 'quantities of capital' in value terms, depending on the patterns of prices, profits and wages, or the distributive shares (see proof in Bose (1980) pp. 72-4).

Of course, neither of these problems connected with its use implies that the concept or the word 'capital' should be banished altogether from the language of economics, including development economics, which is our special concern at this writing. In deference to common usage we can retain the use of the term 'capital *goods*', though 'means of production' employed by Sraffa would be better.

But the impossibility of speaking of capital as a factor clear the ground for reserving the use of the term 'capital' when used *alone*, only as a collective noun which represents capitalists as the coercive social power of a class or a coalition of classes. As we have noted in chapter 3, sec. 3.6, this is an important idea in development economics. We shall argue in the next chapter that this power can be used either to perpetuate underdevelopment, or to promote development.

As regards the non-uniqueness of the value of the means of production or 'capital goods' invested—the second issue—, this result of commodity production theory suggests that estimates of the 'incremental capital-output ratio' (ICOR) may sometimes be low not because the effectiveness of investment is high, but simply because profits (or wages) are high. This may explain why, in spite of low ICOR, we have perpetuation of underdevelopment. (This possibility is recognised in Chakravarty (1987) pp. 54-5, quoting K. N. Raj).

4.11 *Unequal profit-rates and wage-rates*

Most Sraffa-type models postulate a uniform profit-rate, and it is widely believed that they also postulate a uniform wage-rate in all sectors of the economy. This is not so. These matters have been discussed in Bose (1980) chapter 15, Bose (1984a). Unequal profit-rates and wage-rates can be visualised as being the outcome of monopolistic restrictions on entry into sectors imposed by capitalists and powerful trade unions indulging in closed-shop practices, monopolistic output-restriction by them, with or without statutory price, profit and wage controls. Sraffa-type models can take care of such possibilities, without which their usefulness for analysing problems of underdevelopment and development would be nil. For we have seen in earlier chapters that though mainstream development economics ignores the role of such monopolistic restrictions in analysing underdevelopment, it relies heavily on 'monopolistic expansionism' to get development started.

4.12 *Miscellanea*

It remains to add that there are other well-known themes in development economics which can be handled by Sraffa-type models with some suitable adaptations, such as (i) underemployment of the labour force, the phenomenon of the 'effort of labour' falling below the quantity of labour employed, disguised unemployment and open unemployment in the urban sector,

(ii) the so-called 'unreported' or 'informal' or the 'black economy' existing alongside of the 'reported' economy (which are to some extent, actually brought into existence by an 'activist State' which is committed to development), (iii) sectors of the economy engaged in 'human resource management' (or development) of various kinds, including education (formal and informal), dissemination of information through the media—of various kinds, (iv) identification of various social classes (e.g., capitalists and workers), of sub-classes (e.g., rich, middle, poor peasants and farm labourers ; money-lenders ; merchants, salaried and non-salaried professionals), of hybrid classes (e.g., capitalist landlords who also own and manage industrial shares ; rich peasants who employ their own along with hired labour ; absentee landlords who are industrial workers or professionals).

In this chapter glimpses of the many realities which Sraffa-type models can handle have been given. But can these models help us to understand better what, as we have seen in earlier chapters, the models of mainstream development economics cannot help us to understand very well, viz., the causes of underdevelopment and development ?

CHAPTER 5

UNDERDEVELOPMENT : A CHANGED APPROACH

5.1 *Introduction*

A reader who has looked into Sraffa, may ask whether in the discussion of Sraffa-type models of production with a surplus, we have not overlooked the one Sraffa model which seems to be tailor-made to analyse problems of underdevelopment. Did he not put forward a model of interdependent production *without* a surplus (Sraffa (1960) chapter 1) ? But does this 'simple' model of his say all that he had to say about underdevelopment and long-term stagnation ?

It would be most unfortunate if such indeed were the case. For Sraffa's simple model of production without a surplus resembles no known modern underdeveloped economy. In this model, there is no explicit reference to labour, wages, profit, land and land rent, and, of course, no reference to specialized trade, transport—though there is production, exchange and consumption.

5.2 *Causes of underdevelopment*

Fortunately, Sraffa himself went on to develop his models of production with a surplus, affirming (chapter 3, p. 12) that a society which 'produces just enough to maintain itself' can *also* be portrayed in the format of a model of production with a surplus, with labour, wages, profits (and by implication land and land rent) etc. explicitly represented. But he limited the possibility to a highly special case (which also no existant society resembles) where 'the whole of the national income goes to wages'.

We can easily transgress the limits of this special case and say that in a Sraffa-type model of production with a surplus, with all the properties enumerated in the previous chapter, there will be stagnation or long-term underdevelopment, if the following conditions hold.

First, there are no changes in the scales of production. This means, for example, that there is no change, e.g. increase or decrease by 10% or 5% or 1% of wheat, iron, tractors or *any other* output. All outputs remain constant year after year.

Second, the proportions in which the material inputs are combined (with each other and with labour and land) remain unchanged. This means, for instance, that not only the quantities of wheat output, but quantities of wheat input (e.g., as seed), fertiliser, labour-hours, hectares of lands of one or different kinds, remain unchanged year after year.

Third, the social surplus produced consists entirely of consumer goods (whether basic, i.e. essential and universally consumed wage-goods, or non-basic, e.g., luxury goods, or non-essential wage-goods entering into workers' diversified consumption patterns).

Alternatively (fourth) surpluses of producer goods (non-basic or basic) as well as of consumer goods are produced but exported to obtain imports consisting only of consumer goods.

Economies which these conditions hold in a vice may otherwise differ very much from each other. They range from those in which there is acutely 'underdeveloped' underdevelopment, to those which resemble developed economies in almost everything except in their underdevelopment.

5.3 *Patterns of underdevelopment*

The reference to 'underdeveloped underdevelopment' is not really simply a play on words.

Countries which suffer from this malaise have economies of production with surpluses and unequal incomes. The income-inequalities will arise from the inequality between profit, rent and wage incomes, as well as of differences within the categories of profit, rent and wage-earners. They may suffer from shortage of transport channels and facilities, of specialised traders, of much underemployment of labour, high rents earned by landlords in particular, with very little industry or foreign trade, high rates of population growth, etc. In short, they may look very much like economies described in the pages of The Wealth of Nations or of Problems of Capital Formation in Underdeveloped Countries (Nurkse) or The Theory of Economic Growth (Lewis). The State may be powerful and 'activist' in a 'mean and malignant' manner (like the English East India Company in India castigated by Adam Smith as the 'plunderers of India').

On the other hand, there may be countries suffering from 'developed underdevelopment' in which, also, there are grave income-inequalities, but which hardly resemble the first category in anything else. These countries have well-developed transport and marketing facilities, are considerably 'industrialized', a spectrum of technologies in use ranging from the 'bullock cart to the tractor', high literacy rates and average life-expectancy. They may also be well integrated with the world economy as important 'peripheral' countries with the sectors of the indigenous economy smoothly geared to high rates of capital accumulation at the 'centre'. They may have done away with rent-receiving landlords by land reforms, so that only rich farmers and peasants earn rents (which may or may not be lightly taxed). They may even accomplish successfully the 'demographic transition', with coerced or voluntary adoption of contraceptives, 'small family norms' achieved through family planning. The numerous salient features of India's 'developed underdevelopment', listed in a somewhat sketchy manner by Chakravarty (1987) pp. 42-4, will fall into place if geared to the notion of 'non-basics' as developed in chapter 4, sec. 4.9 above and in the next section.

5.4 *Guided underdevelopment*

Why do the conditions of underdevelopment enumerated in 5.3 above hold across such widely variegated patterns of utilisation of material resources?

Before answering this question, a nagging doubt must be removed. Is not too much being explained by reference to 'luxury consumption'? After all, it may be thought, standard examples of 'luxury' goods cited by Sraffa, to wit race-horses or ostriches (Sraffa (1960) p. 8) are rather quaint and cannot explain too much even if we include hoarded gold biscuits (which is sometimes done in the literature). But non-basics consumed as luxuries in underdeveloped countries nowadays must be considered to include expenditure on arms (from arms aid, and commercial expenditure by the State plus illegally spent expenditure on smuggled arms by anti-State forces), on drugs and narcotics (for some minibus drivers in congested Calcutta streets for whom superhuman effort is required to stay at the steering-wheel and stave off unemployment). Sraffa's dry-as-dust category of 'non-basic' consumer goods must include all these, as well as more easily identifiable luxury consumption in the form of luxury housing (in rapidly expanding cities and towns, as well as in villages) undertaken to evade taxes and restrictions on foreign earnings (especially from employment in the oil-rich West Asian countries). Development economics will gain in relevance and realism, even if it loses a little of its respectability, by taking seriously these facts of the 'unreported' and 'informal' sectors. More complicated are 'non-basic' expenditures *imposed* on the underdeveloped economy by badly designed structures of licences and permits and controls, a multiplicity of controls imposed for their own sake (rather like proliferating intermediaries entrusted with the charge of collecting land revenue). But they are clearly 'non-basic' expenditures because they are imposed and unnecessary (even if many such expenditures are incurred, as 'speed money', to cut through red-tape to reduce time spent in securing the right to incur expenditure for the production of *basics*).

To revert to the main theme of this section : why do the conditions enumerated in sec. 5.2 above hold and perpetuate underdevelopment ?

The short answer is : essentially because scales and proportions and commodity compositions of GDP and foreign trade cannot be changed without the intervention of the 'human' or 'social' factor. Physical, material inputs and outputs cannot start moving on their own and changing economic processes any more than pawns on a chess-board can be made to move by the kings and knights. Nor can the 'materialised' human resources, the human robots, who sometimes join the ranks of bureaucrats and technocrats, whether they are resourceful or not, and whether they are motivated by legalised money power or corrupted money power.

Of course, it is not that the 'human' or social factor is missing in these countries. It may be, and usually is very strong in relation to the so-called market mechanism (so-called, because the invisible hand of the market-place is very much there and visible behind the scenes). The socially coercive power of some human beings over others is also usually very strong in these countries. The economically activist State, endorsing the economic power of planners and programmers prescribed by Rosenstein-Rodan may also be distinctly visible in all underdeveloped countries, especially during and after the UN 'development decade'. There may even be plans which are even implemented, but only to establish and maintain the conditions of underdevelopment enumerated above.

Planning is limited to, or planning ostensibly for development, is implemented as planning the production and consumption of non-basics of some or of many kinds. Foreign aid and investment and trade planning, planning drought and flood relief—all are geared more to the production and consumption of the desired non-basics than of basics.

A great deal of physical energy, of human energy of brawn and brain, and generated by passions flowing from the heart, are harnessed by such planning. But when all is said and done, it remains planning for guided underdevelopment.

CHAPTER 6

DEVELOPMENT : LIMITED AND CONTINUOUS

6.1 *Initiating development*

Conditions which must hold for development to occur are :

(i) some change in the scales of production (in the sense explained above, in Ch. 5, sec. 5.2).

(ii) some change in proportions (in the sense explained in Ch. 5, sec. 5.2, or technological change of various kinds, which save or augment labour, land or 'capital goods' (understood to be raw materials, machines, buildings or tools). This would include cases where skilled or unskilled labour are substituted for each other, or both are substituted partly or wholly by automated machines, computers, etc.), in some or many sectors. But it would also include *reverse* substitution, of humanised enriched labour for such automated machines, computers etc.

(iii) production and reinvestment of surpluses of producer non-basics such as machinery to produce indigenously private cars for the rich instead of buses and trucks in India and of producer basics (in excess of consumer basics) such as 'heavy industry' products like petroleum, coal, electricity, steel, but also chemical fertilisers, hybrid seeds, dams, tube-well equipment for producing wheat and rice.

All three conditions must hold together for continuous development to take place. (If, as regards (iii) there is surplus only of producer non-basics, only limited development can take place.)

Of course, (i) does not have to apply to all sectors : *there may be no change in scale in some sectors.* Nor are *decreases* in scales more important for development than increases. It is *not essential* for some processes to *contract* so that other processes may *expand*, especially if there is surplus labour and land (e.g., coal mines and small-scale industries do not have to close so that petroleum production and large-scale industries may expand). Nor does (ii) apply to all sectors, *pace* Schumpeter. The 'gale' of innovations does not have to rage in all sectors (nor, of course, should it literally be 'perennial', for if it is, no production and development can occur, but only an economic catastrophe). The change in proportions required by (ii) does not have to involve *elimination* of processes but only the introduction of some new ones, along with new products. (An economy does not start developing, for example, because bullock carts are driven off village streets, and hand-pulled rickshaws off congested urban lanes (in Calcutta, for instance),—even though motorised transport facilities are not adequate. Nor does it start developing simply by 'modernisation' involving substitution of living labour by computers, even when for lack of domestic software production these have to be imported, as appears to be the case at present in India.

Under (iii), surpluses of *producer* non-basics at least will have to be produced, even if there is pressure only to *change* the range of non-basic products available for consumption, and such change is not possible by manipulating the pattern of foreign trade.

6.2 *Limited development*

Whether there is pressure only to change the composition of non-basic consumption, or also to increase the quantities of existing non-basics consumed, production of surplus *producer* non-basics and reinvestment out of these surpluses would end underdevelopment and stagnation.

However, the development impulse will peter out sooner or later, if there is no increase in surplus production of basics as well. How long these 'waves of development' will last will depend upon how many stages of non-basic production there are, how many non-basic producer goods enter into the production of consumer non-basics, how much and in what proportions basics enter into production of these non-basic producer goods, on the durability of machines, buildings and 'social overheads' used to produce these non-basic producer goods, etc.

These possibilities brought into focus by Sraffa-type models help explain why (as noted at the end of chapter 3 above) high investment rates can still yield less than 1% rates of long-term growth.

6.3 *Continuous development*

If surpluses *are* being produced (or being built up via foreign trade) of consumer as well as producer basics, *continuous* development, and not just limited development, is initiated. According to our commodity production theory approach, it is enough for there to be surplus production and reinvestment out of the surplus of *some* producer basic (e.g., coal or fertiliser) for *continuous* development to start. There is no need for the rate of growth of output of the producer basics, individually or collectively (i.e., as a sub-aggregate in value terms), to *exceed* the growth rate of output (again, individually or collectively) of producer non-basics. (In any case, in what has just been said, it is the *physical* growth rates, such as so many tons of coal, which are relevant. Value sub-aggregates are not relevant in this context, both because there can be no such sub-aggregate in *physical* terms except by assigning arbitrarily chosen "weights", and also because there may be such changes in relative prices as to suggest, in value terms, growth of output of some producer basic, when there is no such growth in physical terms). If this happens, positive rates of growth in value terms of producer basics, even when they are higher than the rates of growth in value terms of producer non-basics, may occur, but there may still be no continuous development. On the other hand, it must be emphasised that faster growth in physical terms of the output of all producer basics may be fully justified if, in addition to continuous growth, it is necessary to build up a heavy industry base (or Marx's Department I sector) to escape, as quickly as possible, from an economic blockade or political and military 'encirclement', as imposed by the advanced capitalist powers at various times on the Soviet Union, People's China, or Vietnam, or India during World War II, or the potential threat of such blockade or encirclement, which were very real even if their extent and nature were exaggerated, in various "over-reactions" as is now recognised in retrospect.

How much of the surpluses of basics are utilised to expand producer basics, and how much to expansion of producer non-basics will decide, *ceteris paribus* (i.e., as regards scales and proportions or technology) how high the rate of continuous long-term growth will be. The pattern of such allocations will also make a difference to the pattern of rates of growth of basics and non-basics. (Some complicated patterns are presented in Bose (1975) pp. 155-67). These differing patterns may explain (and not only population growth rates) why so many countries have long-term per capita income growth rates at less than 3% (see Bose (1975) chapter 3, sec. 3.8).

6.4 *Transition*

Cutting down on expansion of producer non-basics, without reduced employment of labour and material resources, i.e., by diverting more producer basic surpluses to expand production of consumer and producer basics, can enable an economy to make a transition from limited to continuous development.

However, attempts to accomplish such transitions may run into several problems.

6.5 *Problems of transition*

First, *elimination* of producer non-basics is impossible because it is never possible to segregate them from producer basics completely. Apart from the identification problem arising from the well-known problems of 'aggregation', whose significance can be exaggerated (see Leontief (1967, 1986) pp. 41-54), there is the real-life problem that producer goods are partly specialised in production of non-basics in underdeveloped countries (e.g., refrigerators, which may, however, be used also to store cheap medicines), but are partly not so specialised (e.g., most types of coal, steel, and petrochemicals). The allocations have to be *quantitative* when they are not so specialised, and not *qualitative*, as they can be, when they are. Qualitative allocations are generally more easily enforced than quantitative allocation. For example, the construction of high-rise luxury apartments, and the conversion of city parks rendered derelict by neglect of maintenance by a socially cynical and irresponsible leftist civic body (as in Calcutta) into under-utilised 'cultural complex' showpieces can be stopped more easily by fiat, than can be the use of luxury fittings inside these buildings. The former *can* be stopped, but the latter cannot be stopped so easily, by the state acting on the basis of a *single* complaint by a single *individual,* which *in this case* should be sufficient to justify action.

Second, in developing countries trying to make the transition as much as in those which have made it, non-basics may fairly quickly become basics (e.g., diesel-based power generators may become basics with widespread load-shedding by electric power plants). So the lists of basics and non-basics have to be changed quite often, not only for conventional reasons (due to the introduction of new basic and non-basic products), but also for unconventional reasons (like the changing incidence of power failures).

Third, redeployment of labour and material resources from non-basic producer goods' production to basic producer goods' production may be difficult. There may be resistance to withdrawal from non-basic production and flow into basic production by non-unionised as well as by unionised labour (the power of the latter is usually exaggerated and the power of the former ignored), and even more so perhaps by the collusive inertia of owners and managers (often in collusion with labour, and, of course, government officials). Peculiar problems may arise of which only a special case has so far attracted attention, viz., the so-called rural-urban migration problem. (Another special case is Akerloff's highly unrealistic model of caste equilibrium, the 'rat race', discussed in p. 2 to the General Introduction etc. see Akerloff (1976)).

Fourth, controls imposed by planners backed by enforcement agencies of the State to divert allocations from production of producer non-basics to production of basics establish *new* areas of non-basic activity. Some controls may reduce allocations to targeted non-basics, on the one side, but also increase the sum-total of allocation of resources to non-basics. This is easy to see, if the *speed* of allocation which is slowed down by the multiplicity of controls exercised through a multiplicity of 'windows' is taken into account, along with the length of queues of applicants for permits to divert allocations. Moreover, multipurpose single-windows (as in Indian post offices) can generate as much time-consuming non-basic activity connected with basic production of standing at the queues, as single-windows which hand out turn-key permits jointly sanctioned by several controllers. Every such lengthening queue, like queues at railway stations, post offices, no less than for film shows, having introduced non-basic activity in the first place, adds further layers of non-basic activity by those who jump the queues, jump the queues which jump the queues .... and so on, fortunately in a finite chain.

6.6 *Concluding remarks*

In this chapter, the ABC or the generalities of development economics as it can be understood in terms of Sraffa-type models have been indicated. We turn now to some specifics of development processes examined in terms of these models.

CHAPTER 7

DEVELOPMENT OF MATERIAL RESOURCES SECTORS, SCALES, PROPORTIONS

7.1 *Sectors*

Models are useful because they discipline our thoughts when we are trying to understand complex realities. The models of commodity production are particularly useful in discouraging too much enthusiasm about some traditional concerns and prescriptions of development economics about sectors, scales and proportions with respect to the development of material resources.

Firstly, by explicitly providing for the use of land in all sectors, it disallows indefensible distinctions between land-using agriculture on the one hand, and other sectors which are not land-using on the other.

Secondly, in these models, the distinction that is usually made between 'mechanised' industry (and modern transport) and other sectors, which are not mechanised in underdeveloped or developing economies, is not made too much of. Machines being clubbed together with all durable equipment, buildings, etc., social overheads (always very much in the picture in development economics) certainly represent 'mechanised' sectors. So does agriculture, even without tractorisation, with hydel or deep-well lift irrigation in dry-land farming, or even in rain-fed land farming with chemical fertilisers, use of high-yielding varieties of seed, multi-crop cultivation, etc.

Thirdly, not only multi-crop cultivation, but also joint production of several agricultural and industrial products (with some of both the agricultural and the industrial products being marketed by peasant families who reduce underemployment of labour in agriculture in this way)—can be captured by the device of 'sub-systems with joint production' of commodity production models.

Fourthly, the only distinction Sraffa himself made between industry and agriculture, was between the 'continuous flow of industrial production' and the discontinuous flow of crops 'after the harvest' in agriculture (see Sraffa (1960), pp. 3, 94). But this understanding can be easily, and realistically, modified to capture the realities of multi-crop farming, dairy-farming, joint production of discontinuous agricultural products and continuous-flow industrial products by 'sub-systems' manned by farmers, etc.

So much for the traditionally identified sectors of development economics. What about the roles of sub-sectors within the conventionally identified 'industrial' sector, to wit, consumer goods and raw materials producing 'light' industry, heavy raw materials or machines producing 'heavy' industry (the latter further sub-divided into machine-tools and machine-making industry), and finally microchips and electronics producing units which have made the 'light' and 'heavy' dichotomy inapplicable to them? Needless to say, not only developing economies undergoing continuous development, but also those undergoing limited development (or even of stubborn underdevelopment) now have all these diverse kinds of 'industrial' production. Commodity production models wisely provide for all of them, stressing that all of them involve interdependence in production (there are no 'one-way avenues' from heavy industry to light industry, etc.), and all of them produce both basics and non-basics of various kinds. The implication is that differences between underdevelopment and development (limited or continuous) cannot be traced back, as some development economists (prominent among them Dobb (1960) did, to the absence or presence of a 'heavy-industry bias' in industrialisation strategies).

Commodity production models also warn us against other pitfalls connected with ideas about the role of different sectors in the production of 'surpluses' available for reinvestment and development. On the one hand, the theory visualises the possibility that the social surplus available for reinvestment can originate in *all* sectors of the economy where basic producer goods are produced, and be allocated in positive amounts to all these sectors (though not necessarily in the proportions in which the aggregate social surplus 'originates' in various sectors). On the other hand, it visualises the possibility that the aggregate social surplus may originate in only some sectors and then be allocated for reinvestment in positive quantities to all sectors, or only to some sectors, not necessarily to those where the social surplus originated (strictly, not even to *any* of them). Monopolistic restrictions in *uncontrolled* markets may intervene to establish such patterns. It is important to note—in view of the strong bias in favour of State activism and in favour of overlooking similarities between private and State monopolies in development literature—that such peculiar patterns may also be set by centralised quantity controls of inputs and outputs, or decentralised quantity flexibility permitted to State enterprises or statutory quota/price-fixing agencies (e.g., in India, for example, the Agricultural Price Commission). (On the other hand, price controls and restrictive fiscal intervention (though not subsidies) by the state effect transfers of material surplus from one sector to another, the *less* effective they are, and the more they are evaded. The more effective they are, the more the financial surplus are reordered without any change in the pattern of material surpluses).

These possibilities visualised by commodity production theory correct any vague neophysiocratic impressions that processes of underdevelopment and development have to be understood by remembering that the material surplus originates in agriculture and nowhere else. Or the Ricardian notion that it never originates in agriculture. Or the Marxian notion that material surpluses generated in industry are always higher than in agriculture. Or neomercantilist notions that financial surplus reflect material surpluses. All these deep-seated notions embedded in the unconscious if not the conscious minds of most policy-makers, even of those who may not be aware of physiocratic and mercantilist ideas because they have not read them, or even heard of them, are corrected by commodity production theory. This is just as well, because for a variety of reasons, these notions have a strong 'commonsense' appeal and are easily improvised by the self-taught. Some of them also have a strong appeal for historical or political reasons. Thus the traumatic experience of the Indian sub-continent where the English came as traders but stayed to rule, where, in times of famines and world wars, Indian traders minted money out of the blood and tears of the masses, there is a prejudice against trade which is not so strong elsewhere (e.g., in West Europe or North America where neither foreign nor local traders have ever dominated the State).

It remains to add that commodity production theory recognises that trading and transport are examples of sectors where no material surpluses are *ever* produced. The physical quantity of each traded good output is always equal to the physical quantities of traded good inputs of that good into different sectors. So also is the case with transported goods.

It does *not* follow that transport and trade are not needed, are *dispensable,* for development. On the contrary, specialised trade and transport, by reducing the necessary costs of exchange, are indispensable conditions for development to take place. Without them, the alternative of localised direct exchange or barter will curtail production. So attempts to restrict, or abolish, trade and transport will partly hamper development by cramping and reducing production, and partly by generating clandestine, 'unreported', trade and transport which, being 'non-basic', will curtail continuous development (because it is impossible to do away with trade and transport).

Of course, output-restricting, input-wasting, slow-moving monopolistic trade and transport by private and statutory monopolies (and unionized monopolistic labour) will hamper development. But so can such monopolies in production. Neither in reality nor in commodity production models is there any intrinsic reason which makes the degree of monopoly in trade and transport greater than in production.

7.2 *Scales*

Development can take place by change in scale of production in some sectors *without* changes in proportions in which inputs are combined (change in technology) within these sectors. It can also take place by increased production which *does* involve changes in inputs and outputs (or technological change) in some sectors.

Commodity production theory captures the reality that at the initiation of continuous development, there is likely to be increased scale *without* change in proportions in *more* sectors than increased production *with* changing proportions. Moreover, such expansion with 'constant returns to scale', in the sense of Sraffa, can be found in agriculture, no less than in non-agricultural sectors. The reason is that the aggregate physical quantity of land available nowadays to an economy is seldom augmentable. But for *each* agricultural use (i.e., for a particular agricultural product, in a particular location, near or far from road or urban market, for each kind of soil), and for each farm (big or small), the quantity of land available is variable as input for increased production without a change in 'proportions' or technology. So 'constant returns to scale' *can* prevail : there *can* be a 10%, or 15%, or 7% increase in wheat output with an equal proportionate increase in all inputs, including land, as long as the sectors (or farms), from where the land is transferred, are compensated by industrialisation or technological change, which is land-reducing. (This is also an implication of the empirical findings regarding Indian farm production that there is no clear superiority of large-scale capitalist farming over small-scale peasant farming or vice versa (see Rudra and Sen (1980) pp. 391-94). Such expansion on the basis of constant returns to scale to promote development may occur in transport (as noted in chapter 6, sec. 6.1), and industry also.

Commodity production theory also clarifies another aspect of the development process as reflected in changes in scale of production in different sectors.

The conventional wisdom of development economics puts major stress on the one-way relation from factors to products. This carries the implication that most sectors are competitive—competing for factors, whether 'primary' or 'produced'—rather than complementary with each other. With such an approach, the expansion of some sectors, which have greater development potential, is facilitated by the *contraction* of others when continuous development starts (especially after labour underemployment ends, or when there is no underemployed labour).

In contrast, the central emphasis in commodity production theory is on two-way interdependence ; all basics are interlinked by two-way interdependence. So, by this approach, if there is increased scale of production in some basic sectors to initiate continuous development, the scale of production in other basic sectors must not contract. A decreased scale of production in other basic sectors would not only directly reduce the social surplus *ceteris paribus*. It will also do so indirectly by forcing other basic sectors with which it is linked by ties of complementarity to follow suit, and thus exert a further pressure pulling down the overall rate of development. How far this negative effect of contraction in a particular basic sector is, will depend on how dense is the network of linkages, forward and backward, ramifying throughout the system, of the affected basic sector. This changed approach discourages neoclassical illusions that contraction of the cotton textile, or jute industries in India, for example, will promote development *ipso facto* by 'setting free' precious skilled labour and other resources for modernised 'futuristic' electronic industries. *Even if* the process of 'setting free' *is* accompanied by a process of reabsorption (which is a big *if*), there will be a negative effect which must be taken into account before such a 'historic' decision is taken. After all, cotton textiles will probably remain basic in India, even if she does make the transition from being a country of limited economic development to becoming a country of continuous development.

7.3 *Proportions*

For simplicity, sometimes in the literature changes in proportions in some sectors as an aspect of development (or underdevelopment) have been shown as taking place *without* the introduction of new products into the system (i.e., Bose (1975) chapter 11). In fact, of course, such changes in proportions always involve the production of new products by new sectors added to the system, which enter as inputs into some other sectors which produce old products with some new inputs combined with old inputs, to establish the new proportions through a change in technology : some new gadgets, tools, machines, etc.

Such changes in proportions can be relatively concentrated or dispersed. By backward and forward linkages such changes in a few sectors may induce necessary changes in proportions involving several sectoral inputs. For example, hybrid seeds, irrigation, synthetic fertilisers and tractors may be substitutes rather than complements in agriculture undergoing a Green Revolution. On the other hand, the induced changes may be limited. Electric superpower plants may require large increases in coal production of better quality (the output of specially designed coal washeries) than available for normal use in obsolescent steam locomotives, coal-using blast furnaces in iron and steel plants. . .

The point just made has been discussed in detail in the literature (e.g., Hirschman (1959) chapter 6). But 'aggregation' of sectors in empirical studies of forward and backward linkage effects underplays the differences between concentrated and dispersed linkages, which therefore do not receive sufficient attention. On the other hand, the point made earlier, in the first paragraph of this section, is taken for granted in mainstream development economics. But the 'export-led' strategy for development is sometimes proposed on the understanding that production of new goods within the economy is *not* a necessary precondition, and that existing sectors can be 'modernised' by changes in input proportions utilising the *same* inputs as before, brought about through changes in export-import patterns. Commodity production theory, properly worked out, says this is impossible. Even if grounds for export pessimism can be disregarded for a time, they can only be disregarded if there is production of *new* goods for export. (This seems to be confirmed by the record of the best recent examples of 'export-led' development in South Korea, Taiwan, etc.)

In this chapter, we have explored how far the changed approach of commodity production theory can say a few definite things about the details of sectors, scales, and proportions, in which inputs are combined in developing economies. In the next chapter, some of the major themes of human resource development theory are considered from the angle of commodity production theory.

CHAPTER 8

HUMAN RESOURCE DEVELOPMENT THE MAIN THEMES

8.1 *Introduction*

The themes of human resource development theory have been explored rather more successfully in the literature so far mainly as being connected with the ends rather than the means of development. Literacy, discussed almost, entirely in the context of primary schooled education of children, has been stressed as a goal (and has been downgraded as a means compared to secondary or third level education). So has nutrition, as an aspect of poverty-eradication and supplying basic needs, as well as health, indexed by falling mortality rates and rising life-expectancy at birth (though life-expectancy on reaching working age ought to count more in development economics).

However, in so far as dissatisfaction with ideas of poverty-eradication via income transfers in favour of the poor led to concentration on supply of basic goods, and this in turn led to the emergence of capability theory, these explorations of ends has converged towards recognition of human resource development as a means. Enhanced capabilities, after all, would also add impetus to development, apart from being desirable per se ; subsuming the goals of poverty-eradication and supply of basic goods, the impetus would be further reinforced. (The statistical discovery that the same rates of growth correlate well with multiple income-distribution patterns was less conclusive in focusing on poverty-eradication as a means).

The alternative approach, inspired by Adam Smith ((1776, 1937 p. 247), and endorsed among other by Marshall ((1890, 1936) pp. 216, 564), lays stress on the importance of 'human capital' viewed as 'fixed capital' like machines. This approach fits in smoothly with the stress on development through accelerated 'capital formation' in modern development economics, and the literature coloured by this approach has made the 'economics of education' the major branch of the now extensive literature on human resource edvelopment. But it suffers from limitations which must be mentioned.

First of all, there is the initial question of what can be named the 'Mandeville prejudice, *against* literate labour as an instrument of development. Mandeville (1714, 1970) with uninhibited bourgeois candour argued at length that 'Reading, Writing and Arithmetic are very necessary to those whose Business require such qualifications, but they are very pernicious to the Poor, who are forced to get their Daily Bread by their Daily Labour . . . every Hour those of poor People spend at their Book is so much time lost to the Society. Going to School in comparison to Working is Idleness, and the longer Boys (of the poor-A.B.) continue in this easy sort of Life, the more unfit they'll be when grown up for downright Labour, both as to Strength and Inclination. Men who are to remain and end their Days in Labourious, Tiresome and Painful Station of Life, the sooner they are put upon it at first, the more patiently they'll submit-to it for ever after. . .Those who spent a great part of their Youth in Learning to Read, Write and Cypher. . .will look down upon downright Labour with the utmost contempt. . . When Obsequiusness and mean Services are required we shall always observe that they are never so cheerfully nor so heartily performed as from Inferiours to Superiours. . .Inferiours not only in Riches and Quality but likewise in Knowledge and Understanding. .' (pp. 294-96). Mandeville made it absolutely clear that education can promote development only if it is imparted to create 'Tradesmen and Artificers' out of those who in their 'native Stupidity' were 'next to Brute Beasts' when a country was lacking in tradesmen and artificers (Mandeville (1714, 1970) p. 324) : This all-important question has never been explicitly faced and answered. This is one reason why for rather untenable reasons, there are views emphasising higher education (e.g., Harbison and Myers (1964) p. 40) and de-emphasising primary education and also a demand for 'restricting higher education' so that 'persistent underinvestment in primary education' can be ended (Blaug (1983) p. 110, 113).

Second, modern manpower forecasting estimates which were generated by an initial enthusiasm for this approach in development economics have been discredited because (i) of 'mounting evidence that an extraordinary variety of manpower structures are compatible with identical levels and rates of national income' (Blaug (1984) p. 110), (ii) 'virtually all manpower forecasts of the long-term variety (i.e., those that look ahead five to ten years —A.B.) have turned out to be seriously wrong' (Blaug (1984) p. 110), (iii) manpower forecasts 'give no help' in estimating requirements for primary-educated workers, who are apparently ignored for the totally untenable reason that most of them 'largely end up in family farming' (Blaug (1984) p. 110).

Thirdly, the main alternative to discredited manpower forecasting, viz. 'social rate of return' to levels of education as the basis for establishing links between educational development and economic development, has also run into several problems which have lately been even more fiercely posed than the issues of manpower forecasting. The 'externalities of education' or 'neighbourhood effects' of different levels and types of education remain a 'black box' (very little is known about what it contains, see Blaug (1984) p. 111 for the admission). Also, there are strong views expressed that the structure of wages and salaries in an economy is entirely or mainly a matter of social conventions or class or ethnic or sexual prejudices and do not much reflect or indeed reflect *at all*, 'productivity' or contributions to the national income (see references in Blaug (1984) p. 111, pp. 118-29, Carnoy (1985) pp. 161-67).

Sometimes the same writers seem to make contradictory statements about the uses of this method of understanding the problem. Thus, we have Blaug's special pleading : 'If the structure of wages and salaries. . . is a matter merely of social conventions, it will affect the price of steel as much as it does the economic returns to education ; yet few planners would use such an argument to deny the value of calculating the expected rate of return on a new steel factory before constructing it' (Blaug (1984) p. 111). (The argument is a *non-sequitur*. In most cases expected rates of returns from steel factories are calculated *after* the decision to set up steel factories and their location has already been taken on other grounds (see Chakravarty (1987) p. 58) only to arrange for budgetary support before the recoupment period is over.) But the same Blaug also asserts that there is 'a remarkable fact of life : between any two groups of individuals of the same age and sex, the group with more education *of whatever kind* (my italics—A.B.) will have higher average earnings from employment than the group with less, even if the two groups are employed in the same occupational category in the same industry' (1984) pp. 118-19. After a lengthy discussion of various explanations of this 'remarkable fact of life', he concludes : '. . the precise contribution of education to economic growth may well continue to elude us for years to come and, likewise, the role of education in the 'employment problem' of less developed countries' (Blaug (1984) p. 129).

The foregoing introductory comments stress the limitations of modern human resource development theory which has been elaborated on the basis of the 'human capital approach'. This, however, is not the whole story.

Quite early in its career, this approach began to be tested by improvised models of development in which first level and second leevl education as producers of materialised human resources were incorporated (see Harbison and Myers (1964). Tinbergen and Bos (1964), Sen (1964), Sen (1966)). This marked a departure which has forced economists to come to grips with some basic issues about the role of education in processes of development, which were evaded by earlier writers (except, perhaps by Mandeville, who did give categorical answers, however shocking they may sound to most development economists today, to certain inescapable but awkward questions).

In what follows, a fresh attempt is made to face up to some of these basic issues by adhering to the 'modelling' approach, but looking at the issues as those of the role of materialised human resources produced by educational activities in extended Sraffa-type models, which do have a place for them, as noted in chapter 4, sec. 4.5.

8.2 *Literacy and labour*

Is literacy basic or non-basic in the sense of Sraffa in relation to development possibilities ? This question has cropped up repeatedly in human resource development discussions when whether expenditure on education (especially on primary education) is current consumption, or investment in capital formation, has been the issue under debate (e.g., Harbison and Myers (1964) pp. 11-12). Or it is an underlying issue in the writings of those who adopt a political economy approach to education or an institutionalist-functionalist approach and ask whether education represents a 'productive' or 'unproductive' sector of the economy whose sole function is to reproduce the power of the class in power (see Carnoy (1985) p. 158 for references).

It has already been noted that the extract reproduced above makes it clear that Mandeville thought that *literate* unskilled labour was not only unproductive but counterproductive, that even the three R's should be taught only to a limited number of children of unskilled labourers who could be converted into 'tradesmen and artificers', when accelerated development is required. (Mandeville's candid view recalls the injunction in the Law of Manu of ancient India that the duty of the members of the lowest varna (of the four varnas of society) of the sudras was *only* to serve meekly the three higher varnas (who alone were allowed to study the vedas (or the sources of human knowledge) (see Buhler (1886, 1984) p. 24). Even in times of distress, when some relaxation of the rules of behaviour was permitted, the sudras were expressly forbidden to 'recite the sacred texts', though they were permitted in such times to follow those 'mechanical occupations and practical arts by following which the twice-born (i.e., the upper varnas who were reborn 'from the Vedas' after initiation which the sudras were debarred from) are best served' (Buhler (1886, 1984) pp. 61, 423).

Of course, in modern discussions the 'Mandeville prejudice' is seldom given uninhibited expression (at least in print). However, it seems to underlie an occasional reminder that British industrialisation was accomplished *before* there was a literate working-class (literacy followed from development as a benefit and was not a means to secure it). More generally, the argument is that since literacy rates have an effect on growth rates with a long-term time lag, development strategy cannot pay attention to it, but should concentrate on education at second and third levels whose effect on growth has a shorter time-lag (see an objection to this argument in Sen (1966) pp. 73-4, who also emphasised the importance of 'learning by doing' (Sen (1964) pp. 155-56), which can be a process of 'informal education' of the literate, as well as the illiterate segments of the working-class).

Now, whether the 'Mandeville prejudice' is given a strident or a muffled expression, it poses an issue which must be faced. To repeat, is literacy basic or non-basic in relation to development ?

The answer has to be in the affirmative for several reasons. *Firstly,* the twentieth century success stories as regards development tend to confirm that both the socialist countries as well as the capitalist countries who have achieved continuous development. have high literacy rates. *Secondly,* this may be because *both* methods of 'extensive development' (increasing scale without change in proportions) *and* of 'intensive development' (requiring change in proportions or innovations) are more easily adopted if there is literate labour available. *Thirdly,* the problem of the inordinate 10-12 year time-lag for the effects of education to mature is a false problem. In fact, what is relevant is primary school education, since we are concerned as much with literacy as we are with education at higher levels. Even if we are compelled to regard adult literacy drives as more demonstrative than effective per se, these, together with measures for the maintenance of literacy among products of primary school education who drop out on reaching the secondary school stage (or earlier), can alone explain the impressive increases in literacy rates in the socialist countries in the twentieth century.

Fourthly, Mandeville's worry about literacy generating a contempt for manual work is not baseless. Apparently, there *is* such a problem, in the Indian subcontinent where it is the most important legacy of Manu's Law (more important than the persistence of caste-based segregation which also derives from it, but has undergone major neocasteist transformations through 'reversals' in the hierarchical status of castes, emergence of neo-castes in the context of modern statutory voting systems, etc., which cannot be discussed without going deeply into sociology or social anthropology). Apparently, it is a problem encountered also in Africa. But there is no firm evidence that *denial* of education to make the masses literate has been conspicuously successful in promoting high growth rates. On the other hand, the high literacy achievements of fast-growing socialist countries, as well as of fast-growing non-socialist countries in the 20th century, suggest that the negative effect of aversion to manual work of high literacy can be offset by conscious interest in manual work heightened by the spread of literacy.

Fifthly, the worrying problem of high drop-out ratios of children enrolled in primary schools in countries such as India seem to be associated also with low growth rates. They cannot be taken as indirect evidence that primary education is a non-basic but require remedies, some of which are well-known. Of course, the causes are complex and so are the remedies. Thus, economic remedies are free meals, free uniforms, smaller classes (Blaug (1984) p. 113) as well as educating parents to reduce drop-outs among children enrolled (Streeten (1983) p. 5). To these may be added proposals for including such measures as an integral part of anti-poverty programmes rather than as separate programmes which compete for funds and resources with other anti-poverty measures (such as employment generation). A further addition can be provision for a negative educational poll tax per child of primary school-going age, financed from a local educational cess collected and spent by local units of village self-government (such as the panchayats in India). (Drop-outs may be encouraged to rejoin overage literacy schools by being paid a negative tax per head at lower rates as against the high positive fees they have to pay it they want to rejoin at present). Of course, successful drives to raise literacy rates in some cases may require also remedies with ethnic-linguistic dimensions such as multilingual media of instruction (e.g., Urdu as well as Hindi in North India) made operational by introducing multilinguism in official transactions. (Trade-offs between such measures to raise literacy rates and national integration on the basis of one language exist, must be recognised, but will not be further discussed here. The solution is not to sacrifice the literacy objective for a chimerical unilingual national integration, but to work out a multilingual solution to push ahead wih literacy and establish national integration on a voluntary multilingual basis.)

Finally, judging by strong positive correlations in Kerala (India), rising literacy seems to have a lagged but sure effect of increasing *voluntary* birth-control, which could raise per capita incomes. From this point of view, too, literacy is a 'basic'.

8.3 *Secondary education*

Offsetting the Mandeville prejudice, there is a 'restrictionist' bias against secondray (as well as tertiary) education. Blaug, for example, insists that there is a 'case for restricting the growth of higher, and to some extent secondary education. . ' (Blaug (1984) pp. 112-13). The argument is essentially based on calculated average social rates of returns for less developed countries which show the highest rate for primary education, and a higher rate for secondary compared to the still higher third level. Now, for reasons mentioned in sec. 8.1 above, such calculations push a lot of issues under the carpet and do not really justify any such 'restrictionist' conclusion. Besides, Blaug's 'restrictionism' is not extremist. He does *not* advocate expansion only of primary education and a freeze on expansion of secondary education. He probably would not approve of India's record of 'higher education enrolment' rising from 9.7% rate of increase in 1950-52 per annum to 12.4% and 13.4% p.a. respectively in the fifties and sixties, and then declining drastically to 3.8% per annum in the seventies, following the adoption of a 'restrictionist' educational policy in 1968, to go below the 5.5% per annum increase in enrolment at 'middle level' school education over the period 1950-51 to 1982-83 (see Ministry of Education, Government of India (1985) p. 19). For all the noise that Blang makes against the overemphasis on higher education, he leaves several issues open.

To begin with, nobody seems to deny that secondary education is basic as a source of 'human capital' (of skilled labour, foremen, etc.) There *is* a well-articulated objection to overspecialisation of skilled labour on the basis of Ford's injunction that 'the man who puts on the nut does not tighten it' (see Rosenbrock (1983) p. 347), to Taylor's insistence on the robot-like educated worker receiving at least one day in advance and carrying out to the letter exact written instructions as to what is to be done, how it is to be done. . the exact time for doing it' (see Stewart (1983) p. 215). A case has been made out for abolition of the assembly line so that a unit of product (e.g., a car) can be assembled by a single team of workers (see Stewart (1983) p. 221). But these objections to over-specialisation do not add up to a denial of the role of workers with secondary education as direct basics in any development process. Blaug's own complaints are that secondary education has the 'first call on public funds' (Blaug (1984) p. 110), that it tends to expand without limit 'at its own natural rate' (Blaug (1984) p. 116). There is also the point made that 'vocationalisation' of secondary school courses cannot legitimise over-expansion because 'it is impossible to foresee accurately the requirements for *specific* skills. . . two or three years hence' (Blaug (1984) p. 115).

Actually, none of these objections justify 'restrictionism'. As already noted in the previous section, there *is* a strong case for pushing ahead faster with effective (as distinct from mere demonstrative) expansion of primary education. This cannot be achieved by demonstrative decrees that there must be universal compulsory primary education by the year X. Nor can it be achieved by pulling down secondary education. Both have been tried in India and have failed, because the *specific* measures required to raise enrolment rates and reduce drop-out rates have not been adopted. In the absence of such measures, 'restrictionist' drives merely decelerate expansion of secondary education without accelerating expansion of primary education. Furthermore, it retards upward social mobility of some children of the very poor through the device of their acquiring education above the primary school level, especially, if there are reserved places for them under anti-poverty or ethnocommunal upliftment programmes in secondary schools, third-level educational institutions (especially, medical and engineering colleges) and eventually in offices and factories. Thus, 'restrictionism' seems to substitute for Mandeville's 18th century prejudice that as far as possible, labour should be kept *illiterate* Blaug's 20th century prejudice that, as far as possible, labour should *not* be *more than* literate !

8.4 *Tertiary education*

'Restrictionism' does not spare post-secondary or third-level education. Indeed, one gets the impression in some writings that it is this kind of 'higher education' which is its main target. This has been provoked, no doubt, by Harbison and Myers on the one hand ignoring primary education and on the other, assigning a weight of 5 to third-level compared to second level education (Harbisno and Myers (1964) p. 32). The controversy which flared up as a result (see, for example, objections in Sen (1966) pp. 68-70) is about as relevant from the viewpoint of commodity production theory or from commonsense as to a solemn dispute as to whether locomotives are 'more productive' than wagons or the rails on which they run. Self-evidently, all three are productive, as blast furnaces and iron ore are (and which has a higher or lower measure of productivity depends on distributive shares and product prices) (see Sraffa (1960) ch. 3, sec. 20, ch. 6, sec. 48).

If we adopt the commodity production theory's approach to discuss the developmental role of third-level education, we must start by noting that, in contrast to second or first level education, the human capital it produces is heterogeneous in a sense in which human capital produced at lower levels are not. To say nothing of products of engineering and medical colleges, or institutes of technology, etc., even recipients of 'general education' at college and university levels represent human capital of *diverse* kinds, while secondary schools (at least till the 'science' and 'arts' streams divide) produce human capital of the *same* kind. Recognition of this peculiarity leads to questions which are seldom asked, but are more relevant than debates as to whether third-level education is 'more productive', and by how much, compared to second level education.

One of these harks back to deep questions of ideology which are never faced in mundane economics of human resource development and education, but which, like the Mandeville prejudice, must be faced. Although not without fierce (if inconclusive) debates, e.g., in the Soviet debates on 'linguistics' in the late 1940's, it has been agreed that the alphabet, language (including the language of arithmetic) are essential for development. It is an implication of this consensus that school-level education *is* developmental, though, as we have seen, Mandeville gave only a qualified assent to this view. This means that, in the language of commodity production theory, school level education is *basic* for development. Is third-level education also basic—if so, in what sense?

Without going into tedious details, it can be said that third level education is also basic for development of a critical faculty, a dissatisfaction with what *is*, and the visualisation through *criticism* of alternative possibilities (whether through increase in scale without change in proportions or technology, or increased production *with* such changes), is essential for development, as we have argued in earlier chapters that it is. Somewhat unexpectedly—unexpected because 20th century Marxists of all the diverse brands have tried hard to convert Marxian social theory itself into a stimulating, or enervating uncritically accepted 'material force'—, one can cite Marx in support of this understanding. Thus, Marx declared his commitment to 'ruthless criticism of all that exists, . . . both in the sense of not being afraid of the results it arrives at and in the sense of being just as little afraid of conflict with powers that be' and added : 'Reason has always existed, but not always in a reasonable form. The critic can therefore *start out* from *any* form of theoretical and practical consciousness and from the forms *peculiar* to *existing* reality, develop the *true* reality. . . as its final goal' (some of the italics are mine—A.B.) (see Marx (1843, 1975) pp. 142-43). Of course, as is true of many things that Marx said, *inconsistently* with this commitment to *unlimited* criticism which makes *ideas beget ideas*, starting from *any* idea to get at the truer reality—we have Marx's theory of *apologetic* ideology which tends to *deny*, as a recent writer has put it, that 'school idealizations of an equitable and just society may be taken seriously by youth and translated into demands on the workplace and on politicians' (see Carnoy (1985) p. 158), or that non-Marxian economics, for instance, need not be, and is not necessarily obfuscating social apologetics (see Bose (1975) ch. 17, for a discussion). Logically, there is as good a case for taking as seriously Marx's commitment to criticism as his depressing theory of ideological apologetics, to justify the conclusion that the products of third-level education, no less than the products of first and second level education, are development-promoting basics.

If we adopt this view, a further conclusion, somewhat unexpected, follows. It is obvious that the major difference between third and lower levels of education, noted earlier in this section as the 'heterogeneity' of the former in comparison with the latter, has the implication that all products of third-level education, even if they are basic, cannot all be, as it were, 'equally' basic, in the sense that they are not all direct or 'universal' basics, entering into *every* unit of the economy or the 'civil society' in the sense of Gramsci ((1937, 1971) II, 2, III, 2). To take an example, masters of pure physics (or chemistry) are not required everywhere *directly* (though indirectly, in their remote applications they do enter every household and factory or office). However, social theory (not only history, but also economics, as well as political theory) *is* required as a direct, 'universal' basic produced by third-level education, in every workplace, voting place, or household. In fact, one can even press the claim of the bare elements of the economics of development and of education, or of material and human resource development, made available compulsorily as a part of *any* course of third-level education, whatever the specialisation. (The particular branch of social theory to be studied at the third-level, —elements of economics or politics, or sociology for instance, —should be left to the student's choice.).

If there is a vacuum with respect to social theory, in any curriculum of third-level of education in developing societies, politics and economics will remain the preserve of and at the mercy of elitist economists and self-taught politicians, without any critical check from the products of third-level education who would harbour ideas about economics and politics or education as naive as, for example, the outstanding physicist Einstein had. This can be a serious drag on development, particularly when as much knowledge as possible of historical facts, political theory and economics, presented with as little tendencious distortion as is humanly possible,[1] is needed to protect the process of development in the context of complex ethnocommunal as well as class and national or nationality-based conflicts, such as characterise, for example, every country of the Indian sub-continent. It is not so much a curiosity as a calamity that by an act of collective self-abnegation all parties to disputes about third-level education (Harbison and Myers no less than Blaug) underplay the role of third-level education in social theory, including the economics and politics of education.

8.5 *Caveats*

Two caveats must be entered :

First, just as labour alone cannot produce wealth, human resource development is impossible without allocation of increased quantities of *material* resources for the purpose. Without blackboards and books there can be no step-up in primary school education and literacy. Nor can second and third level education expand without buildings, land, desks and books. There is no escape from drastic increases in the proportion of the GNP allocated to education and human resource development from the proportions prevailing at present.

Second, accelerated human resource development, as well as relative stagnation in human resource development, may promote ethnocommunal crystallisation. If consciously integrated with overall development processes, this may enhance human capabilities for development. But if they are ignored or suppressed, ethnocommunal estrangements and hostilities may reinforce tendencies towards limited development, or no development.

8.6 *Human resources vs materialised human resources*

In chapter 6, it was argued that continuous development requires, as a condition, investment in basic material resources. In the following chapter, details of the processes of such investment were considered. In this chapter, it has been argued that continuous development also requires the additional condition of investment in human resources, produced as basics at first, second, and third levels of education to be fulfilled.

It has been further argued in this chapter that third level education is basic for continuous development precisely because its products represent lively, alert, critical human beings with minds and wills of their own, who are essential for innovations to be introduced in development processes. This marks a departure from conventional wisdom about education and development. For experts who disagree on whether expansion of the literate labour force should be emphasised more than expansion of more than literate products of education to make the crucial breakthrough to development, are mostly agreed that for development, materialised human resources as good remote-controlled robots of various kinds are needed : who can read but do not question or propose alternatives, who are made according to the formulae of Ford and Taylor. In contrast, the stress on producing critical human resources as basics at the third level of education, with some knowledge of the social sciences other than the principles of management as worked out by Ford and Taylor, implies that managers and supervisors, who are to implement these principles, experiment with an alternative role for all kinds of labour in the development process.

Can such an approach be extended to develop human resources which have not been 'materialised', on a wider scale ? For sound pedagogical reasons, closely connected with the psychology of the young, introduction of diluted and, adulterated and, therefore, useless or over-heavy incomprehensible courses to develop the critical faculty at the secondary school level will not do (as experiments in India with introduction of courses in economics at the higher school certificate courses have shown). The young at secondary school level have to learn to know and conform before they learn to compare and criticise (especially because they have no opportunity of *simultaneously* 'learning by doing'). But there is a good case for supplementing 'learning by doing' by adult workers with secondary school education by making available regular courses in the physical sciences and the social sciences which develop the critical faculty which are not discouraged by employers and managers.[2]

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CHAPTER 9

STATE, PLANNING, AND DEVELOPMENT

9.1 *Introduction*

References have been made in this study to the black box of politics or economically activist State planning as intruding into modern development economics. The intrusions have now assumed major proportions (see for example, Tsuru (1983), Pajestka (1983), Samuelson (1983), Chakravarty (1987) pp. 14-15). Politics can no longer be assumed to play the role of a 'well-behaved' *deus ex machina*, as it was at the dawn of development economics. But it is increasingly obvious that in this matter the experiences of development economists are rather like those of a man who catches hold of a crocodile, only to discover that the crocodile won't let him go! The results so far are sadly inconclusive, consisting of hunches rather than intuitions, and intuitions rather than systematic knowledge of the many-sided complex interrelations between the economics and politics of development processes. A fuller discussion requires the rudiments of a theory of the State, of the politics of social classes, and of evolving ethnocommunities, as well as of planning. These are somewhat underdeveloped areas in social theory (the theory of the state, though much older than economics, much more than the theory of planning, which is a new sub-branch of economics not much older than development economics). Such a fuller discussion falls outside the scope of this study. But to conclude it at this point would be hopelessly out of date. So a few remarks are given below of what sort of ideas can be put into the 'black box' on the basis of the new approach adopted in this study.

It has been asserted in chapter 5 that State activist planning can be planning for underdevelopment (its four conditions are summarised in sec. 5.1). In chapter 6, it has been argued that it can also be planning for limited, or continuous, development (conditions are stated in sec. 6.1). How do we *ensure* that State activist planning ensures continuous development? Moreover, can there be capital accumulation which is non-coercive (under capitalism or socialism) but will still promote continuous development (a question posed in chapter 1, sec. 1.5, and in chapter 3, sec. 3.6)? The discussion of the role of education as a 'basic', especially of the cultivation of the critical faculty through tertiary education, in the previous chapter, is the beginning, but only the beginning of a new kind of answer to questions of the relation of the State and planning to development.

9.2 *Market and plan*

It has already been noted earlier (in chapter 3, sec. 3.4) that when development economists try to relate planning and the market mechanism, it is not clear whether they want the plan to 'guide' and utilise the market, or to displace it, to contract it, or expand it, —all of which may be subsumed under the formula that the 'plan overrules the market'.

In contrast, according to the new approach outlined from chapter 4 onwards in this study, like State activist planning, the market mechanism *per se* can perpetuate underdevelopment or limited development, or promote continuous development. As Oskar Lange argued in one of his last publications, The Computer and the Market (1967)—the computer *can* displace the market and we *can* use computers *alone* technologically speaking, but the market is a historically inherited *cheaper* mechanism. (This is still true with the super-computers now available, if only because to feed it with information and hand out its directives without the clogging of information channels, or loss of time, incurs a cost which is beyond the reach of would-be developing countries. They seem to be more cost-effective for weather forecasting in India). Also, the 'exception to the rule', viz., that intertemporal allocation of resources cannot be handled well by the market because all goods are not, and cannot be covered by futures markets and futures prices, is *not* ipso facto an argument for overruling the market by direct, planned inter-temporal allocations. At least, not unless well-known 'counter-planning' phenomena, and difficulties of long-term forecasting of probabilistic problems of the future, are totally disregarded.

In short, trade channels are like roads which enable traffic to flow, without creating the traffic. They are *basics,* in the terminology of commodity production theory, which enable basic sectors to generate social surpluses for reinvestment, but do not themselves generate them. They can be used to perpetuate underdevelopment (by making no reinvestment in basic or non-basic producer goods' expansion), to bring about limited development (by restricting reinvestment of the social surplus to expand the production only of non-basic producer and consumer goods), or to bring about continuous development (by reinvestment of the social surplus to expand basic producer and consumer goods' production). There is no rationale for market displacement or contraction, but there *is* one for market expansion and improvement, if there is to be continuous economic development.

9.3 *Scope of planning*

But, of course, the market can be utilised for promoting development only if there is properly designed development planning.

How *extensive* in scope should such developmental planning be ? Recognising, as we do, in commodity production theory that basics enter directly or indirectly into all sectors (existing and to be newly built), development planning *cannot* be limited, á la Rosenstein-Rodan's 1943 blue-print, only to 'the whole of the industry to be created.. to be treated and planned like one huge firm or trust' (Rosenstein-Rodan (1943, 1958) p. 248). We can at best hope that there will not be too many two-way direct basics establishing a very dense network of two-way linkages between the developing 'new' sectors and the 'old' sectors. So that, as noted in chapter 6, sec. 6.1, the 'old' sectors do *not* have to contract, but can be left undisturbed as the new sectors are developing. Whether for operational convenience the degree of aggregation of sectors is high or low, it helps if such links are few rather than many. At the same time, however, by the commodity production theory approach, we can see that macroeconomic planning can be greatly simplified by reducing the burden imposed on planners and planning by the non-basic sectors, by having recourse to aggregation. No detailed planning to restrict the growth of such sectors is required. They can be aggregated together and basic supplies to maintain them at their pre-existing level (to prevent increases in unemployment which imposes an additional burden on planned development) can be made available to all of them aggregated together. (The internal allocation of basic supplies among the non-basic sectors can be left outside the scope of macroeconomic development planning.).

9.4 *Instruments of planning : controls*

In a recent paper on The Latin American Periphery in the Global System of Capitalism, Raul Prebisch (1983) pp. 30-45, has been interpreted by Tsuru (1983) p. 6, as entertaining the vision that socialisation of 'flows' rather than of 'stocks' is required to promote continuous development at the periphery. This would correspond to a prescription of controls rather than of public ownership of means and resources as the effective instruments of planned development. Prebisch also puts much stress on the need for such controls to restrict what he calls 'consumption capital accumulation' (Prebisch (1983) p. 35) which is his by-word for non-basic producer goods—so that resource flows can be diverted to accumulation of basics.

Now, there is no doubt that such restrictive controls on investment in non-basics, *if effective,* can divert resource flows to basics. The snag, as noticed in chapter 6, sec. 6.5, is that such controls are liable to add to the sum-total of non-basic activity in the system. This, however, is no argument against such restrictive controls over non-basics. The remedy must not be worse than the disease. The proper course is to simplify controls as much as possible, reducing them to single rather than multiple controls over every single non-basic activity. The only justification of multiple controls per se is to satisfy the greed for power among neo-Fabian power addicts among bureaucratic planners.

What about basic activities ? Should they operate under laissez-faire and be completely without controls or any kind of State intervention ?

To think so would be to fly in the face of hard facts which made Nurkse inveigh against the 'international demonstration effect', and which induced a Prebisch to make 'accumulation of consumption capital' the villain of the piece in the story of underdevelopment. For, if investment in basics were left completely *undisturbed* in a capitalist economy or a socialist economy with too much income inequality, the result could be disastrous. The increased production of basics are likely to be made available by its producers, especially power-addicted private monopoly networks, but also State monopoly networks which are managed more like 'informal' private monopolies by those in charge of them—through grey or black market activity—to non-basic sectors. How private 'monopoly houses' have skilfully utilised loop-holes in the Indian MRTP (Monopolies and Restrictive Practices) Act to consolidate and extend their power has been well documented, and diversion of their resources to expand the non-basic sectors has actually been encouraged by government policy. The MRTP Act does not extend to State monopolies, some of which are highly concentrated, and some are more 'decentralized'. In their case, too, resources have sometimes been allocated to non-basic stctors as a matter of deliberate policy. Where they are not supposed to do so, there have been widespread allegations recently endorsed semi-officially by Chakravarty (1987) p. 77 of further leakage of resources to non-basic sectors through grey and black market activity, which have never, however, been documented and verified systematically so far. (We also know now from the experience of that particular version of the Polish model of socialism which was in operation in the run-up to the large-scale protest movements of the workers led by Solidarity in the 1980's and its aftermath, that there is a probably immanent tendency towards investment in non-basics even under socialist planning, which can lead eventually to a zero or even negative rate of growth).

What, then, is to be done about investment in basics? The most *wrong-headed* and logically untenable prescription would be to license and control the basic sector also (or, as has been done in India, to license and control *only* the basic sectors, leaving the non-basic sectors largely untouched). For it is self-evident that licenses and controls can (hopefully) *prevent* or permit but they cannot *promote* any activity against which there is an immanent tendency. What is more, the

Indian policy economist, the late R. K. Hazari, pioneered in establishing empirically that industrial licenses issued in India to promote development (and to prevent concentration of 'economic power') were cornered by Indian monopoly houses and then left unused to retard development, and also to further concentrate economic power. This was in the late sixties. A little earlier, Mahalanobis, the architect of India's second five-year draft plan-frame, set in motion a process of de-control of movement and production of foodgrains which was a prelude to what has come to be referred to by both the right and the left among economists as India's Green Revolution. Thus, both Hazari and Mahalanobis proved that controls over basics either do not promote development or their withdrawal does promote development. To be sure, the catastrophic leakage of poison gas at the top-ranking world private monopoly Union Carbide's plant at Bhopal in India cannot be forgotten, though there is a strong tendency to do so. It ought to compete with the catastrophe at the Chernobyl nuclear power plant in the Soviet Union, especially because the poison gas was leaked at an apparently development-promoting plant supplying chemical fertilisers to push ahead with India's Green Revolution in agriculture. Such potentially poisonous 'basics' must, of course, be subject, *not* to so easily violated 'control' but to an active State intervention which imposes a 'qualitative' *prohibition* on the use of such dangerous technology in both the private and public sectors. Alternative technologies for furthering the Green Revolution have to be developed indigenously, if need be, and actively introduced in the public sector. So also have to be developed urgently alternative technologies in India to slow down the creeping but devastating pace of "far-reaching ecological degradation resulting from short-sighted energy policy" (see Chakravarty (1987), p. 67.).

9.5 *Public ownership, competition, the work ethic*

By a process of elimination, we can consider public ownership of the basic means of production as an effective intrument of planning. But as soon as we do so, three problems loom large.

First, like controls without public ownership, public ownership also generates its own non-basic activity : internal and external. Internal : the more bound in red-tape public sector entreprises are, the greater the slow-down in activity, the greater the role of speed-money to make files and orders circulate faster. External : rigid and badly designed price-output-profit policies, 'soft budgeting' and other State-monopolistic practices increase the volume of rejects and thefts of material inputs and outputs, as well as absentee enterprise outside the public sector. All these lubricate the activity in non-basic sectors.

Second, absence of competition, though by no means peculiar to public sector enterprises, though free private enterprise propaganda would have it so, clearly has something to do with slow-down, under-utilised capacity, and poor quality production with which these enterprises are often identifiable. A special point to note is that absence of competition may be a feature whatever the form and structure of public sector activity, and whether it is 'centralized' or 'decentralized' in the form of unitary trusts headed by all-powerful 'apex bodies', or holding companies, or price-and-quota-fixing cartels.

Third, there is now an almost deafening chorus bewailing the absence of a 'work ethic' or aversion to work in public sector enterprises in developing countries.

Of course, it is seldom noted that the problem is usually more serious, or at least as serious, at the top—at the level of the management and the executive staff—than at the bottom, among workers ; and that it is more serious with trade union militants than with ordinary workers. Indeed, there is something akin to Duesenberry's internal demonstration effect of higher-level consumption patterns at work. The manager's prolonged lunch-breaks encourage lower-level coffee breaks ; the executive's refusal to climb the staircase when there is load-shedding by electric power stations and synchronised breakdown of generators (so that the elevators are not working) encourages the militant to do likewise. Nor is 'trade union rivalry' to blame—as is always alleged in India where every major political party has its own separate trade union wing. In Delhi, whether rival trade unions of the left and right, of the government party and the opposition function in government offices or not—all militant trade unionists join hands to establish trade union unity to organise go-slow. In Calcutta, a leftist mayor has not been contradicted by any of the many trade unions of civic workers when he has said more than once that members of civic work-teams belonging to rival trade unions play cards together when on duty, and supposed to be repairing choked drains. A leftist State-level minister of health in India's West Bengal has complained that in a State-run drug-conrol laboratory, the director does not sign the attendance register, and favoured or powerful employees sign after 12 noon with the remark 'PLC' (permitted late coming). (More understandably, considering hold-ups due to Calcutta's gigantic traffic snarls, however, they are also allowed to sign 'DT' (code for 'delayed transport') to excuse delayed attendance).

Understanding aversion to work as a social problem is also obfuscated by strange misinterpretations of statistical data. Thus V. M. Dandekar (1981), well known for his statistical studies of Indian poverty, is on record to claim :

'The workers in the more highly developed and economically more crucial sectors have a clear vested interest in the principle and practice of bilateral bargaining. . . (and) are able to secure higher wages, firstly because there is a relatively larger surplus value to share, secondly because the workers in these sectors possess superior bargaining power which increases with every increase in wages they secure ; and thirdly, because in these sectors the bourgeoisie in the *private sector* or the *State in the public sector,* enjoy greater monopoly power and hence are able to enforce more easily an unequal exchange on the less developed sectors' (p. 98, italics mine-A.B.).

Yet, the statistical calculations made by Dandekar prove, if they prove anything, the *opposite* of what he wants to say. Thus, according to his own calculations as regards the ratio of annual wage per worker to value added per employee in manufacturing in India in 1974-75 the position was as follows : For all his 'superior' bargaining power, the registered factory worker appropriated only 33.6% per head of value added per employee, as against the much higher figures of 60.1% in the unregistered urban sector and 88.2% in the unregistered rural sector (p. 82).

Nevertheless, better statistics would probably confirm that value added per manufacturing sector worker is unduly low in India, not only as compared to advanced capitalist and socialist countries, but also compared to those prevailing elsewhere among developing countries. Moreover, what matters for us with respect to the argument of this section is that it is low in public sector enterprises, even if it is also low in private sector enterprises.

This absence of a work ethic in public sector enterprises is a worrying problem if we want public sector ownership to do better than private enterprise under planners' controls to accelerate investment in expanded production of basics in the system. Especially baffling is the reality that aversion to work is often unrelated to the absence of wage-incentives or 'dishonesty' and 'corruption'. Higher wages and pay-scales do not necessarily generate more work. Rates of bribes are also often quite low. The 'honest' officer or employee or worker will not do more work even for a bribe ; the 'dishonest' one will not do more and faster work even for a bigger bribe.

9.6 *Coercive and non-coercive development*

So far, there is some evidence that coercion in varying degrees and various forms—mental, physical, economic, political, ideological, military—at the workplace, as well as in ministries, planning boards, political assemblies, places of education, etc.—have taken care of the three problems listed above to promote continuous development in some countries since the 1950's.

The phenomenon can even be formalized in terms of 'iron', deterministic, logic in operation in developing countries by extending the coverage of the theory of the 'Isolation Paradox' (Sen (1967, 1984) pp. 135-46), which has been discussed with reference to the problem of the social rate of saving, to discuss these three problems which make it difficult to use public ownership as an instrument for increased investment in production of basics.

The theory of the Isolation Paradox refers to a situation similar to the one which made Rousseau prescribe that men must be '*forced* to be free'. In this kind of situation, it has been clarified, men will not increase savings *even if* they knew (i.e., had the 'assurance') that others *will* save (see Sen (1967, 1984) p. 138). A similar situation can be said to obtain if the man who produces rejects and steals raw materials and output to sell to what is candidly called the 'chor bazar' ('thieves bazaar') in Calcutta, or co-operates to organise go-slow rather than compete, to play cards rather than work—will not produce better quality products, stop theft of material, put in more work during duty hours—even if he knows others will do all these things if he does, or were actually doing so. According to the logic of the theory, the only remedy in such situations is coercion, the adoption of a coercive development strategy.

But in that case, there is no hope for continuous development in a number of countries, including now *all* the countries of the Indian sub-continent, stretching from Afghanistan on to Burma and further on to Sri Lanka. For, in these countries, whether there is underdevelopment or uneven, limited development, ethnocommunal factors lead to the segmentation of all classes, the acute isolation of members of all social classes belonging to one ethnocommunity from those belonging to others. Nor will members of these fractured classes submit to a draconian supreme coercive authority which will force all of them to promote accelerated development.

'Why is some coercion unavoidable to promote development, at least to promote continuous, as distinct from fitful, limited development? Essentially because of the 'immanent tendency' to invest in increased production of non-basics in both capitalist and socialist economies, as noted above. Those not averse to considering larger generalities, which apply as much to underdeveloped and developing, as to developed (capitalist or socialist) societies, though for some strange reason they are discussed as if they matter *only* in developed societies, — may recall the doctrine of Thomas Hobbes : 'Man has the (immanent) urge to be free *in order* to dominate others'. Some coercion by the State, like some exchange through the market, seems to have been the indelible features of *any* human society studied by anthropologists and historians. If some of them dispute this, it is perhaps because they think the coercive power of the State can *only* be exercised through the instrumentality of a 'materialised' State apparatus. They seem to ignore the possibility of the power of ideology, exercised independently of a State apparatus, to exercise coercion of man by man.

The only hope in such countries is to stray from the beaten track to work out less coercive methods of economic development, relying more on developing human capabilities on the basis of ethnocommunal peace than on maximising coercion, even if a minimum of coercion of some social classes by others is unavoidable.

9.7 *Ethnocommunal crystallisations*

The phenomenon of ethnocommunalism, to which references have been made several times in the main text and the footnotes of this study, cannot be ignored any longer as a central feature of development processes, at least in every country, now without any exception at all, in South Asia and Africa and West Asia. (The term 'ethnocommunalism', or the euphemistic term 'ethnicity' which is often used, is a generic term referring to the essential similarities in the processes by which separatist consolidations of tribes, castes, and neocastes (where they exist), the consolidations of politicised religions (traditional or modern) take place, whether or not they crystallise into nationalities or nations.).

Mainstream development economics takes no notice of this phenomenon, because, like the population problem it has been regarded either as a bogey, or a phenomenon, which goes away once a rush for development has been initiated by adopting a strategy which ignores it.

However, the 'logic of history' (as a Marx would say) provides some hard evidence, which can no longer be dismissed, that not only the frustrations of the relative *failure* to develop (as in Assam and Bihar or, at one time, in Tamil-Nadu in India) but relative *successes* in achieving development (as in the Punjab in India, or in both the South and the North in Sri Lanka) seem to have generated hard, ethnocommunal realities which intersect with development processes in ways which have hardly been studied. If politics has been locked up inside a 'black box' in mainstream development theory, ethnocommunalism is locked up inside another 'black box' which is placed inside the 'black box' of politics.

If this ostrich-like attitude is changed even a little bit, it is easy to see that discussion of problems of development of either material or human resources should not proceed without taking into account ethnocommunal claims and counter-claims (e.g., the claims for 'reservations' or 'counter-reservations' with respect to employment, investment, licences, quotas for material resources as well as educational and cultural opportunities). If there is also hard evidence that the problem is peculiar to the Indian sub-continent, it is necessary also to study *why* it is not as much acute a problem in South-East Asia, at least in the same way. Once such an attempt is made, it will be found that the awkward problem of reservation claims and counter-claims, regarded dismissively by planners, is only the tip of a deep-going iceberg, as Indian and foreign sociologists and anthropologists have discovered in trying to meet the challenge posed by the work of Louis Dumont in studying Indian sub-continental hierarchical social structures, based on the ideology of the disjunction of status and power (see Dumont (1980), Dumont (1986a), Dumont (1986b), and also Dumont (1983) Introduction, and Bose (forthcoming) ch. 6).

No doubt, this vast sociological literature on ethnocommunal themes will strike the specialist in development economics as being strange and esoteric, especially when Dumont and the sociologists are preoccupied with ethnocommunal themes per se, and the preoccupation of the development theorist is with such themes in their relation to strategies of development. Indeed to the sociologists, the issues of development economics are of interest only peripherally, if at all. But their vast researches warn the development theorist that there are no easy short-cuts to integrating ethnocommunal themes with development theories and strategies.

But that is no reason why the development theorist should not make a modest beginning by starting with the clues already to be found in the latest thinking in development theory.

One of these new clues is the idea that enhancement of the capabilities of the poor is essential for sustained development, both as an end and as a means for promoting development. The cutting-power of this idea can probably be sharpened by trying to find out how the capabilities of the poor can be better enhanced by removing the disabilities of the poor imposed on them by a denial of their status as members of exploited social classes or sub-classes.

In the countries of South Asia, at any rate, the capabilities of the poor might also be enhanced by recognition of the need for fulfilment of their aspirations as members also of *separate* ethnocommunities, their estrangements arise from almost total ignorance of one's own ideologies (including religions and theologies) as 'general theories of the world' or 'compendia of universal totalising knowledge' (Marx), ways of life and thought, as well as languages, historical, philosophical, literary and political traditions other than one's own. This ignorance is chiefly responsible for unawareness of the internally critical dissenting opinions and trends within each tradition. In fact, no ethnic tradition is monotypic and homogeneous though members of each separate ethnocommunity think so.

As noted above, these 'ethnic separatisms' may be dormant over long periods, over different periods of limited development which a country undergoes. Or they may suddenly grip the masses, and lead to mutual recriminations, and on to active hostilities which dominate politics, economics, education, literature, the media, etc.

How do phases of inter-ethnic estrangement without hostilities, and estrangement to the point of such hostilities change occupational patterns, the work-leisure ethos, inter-age group and inter-sex relations, the mutual relations of the exploiters and the exploited (belonging to the same or estranged or hostile ethnocommunities)? Do such changes enhance or stultify human capabilities which can promote development *potentially*, even if they frustrate and interrupt development efforts while they last? These are matters about which we know little as yet, and have to be investigated. But it is easy to conjecture that *ethnocommunal peace—not* to be confused with ethnocommunal cease-fire and truce which may or may not help—can do better than ethnocommunal strife to convert separatist human capabilities into positive assets for promoting sustained and continuous development.

However, we can already lay down, both a priori and from at least half-a-century's experience, at least in India, Pakistan, Bangladesh and Sri Lanka, that there are clear Don'ts and Do's about ways of achieving such development-promoting ethnocommunal peace.

Purely 'economistic' measures, which stress the importance of enlarging the economic cake, or expanding educational opportunities so that 'all may benefit', while leaving the ideological, cultural, linguistic or political status quo more or less unchanged, cannot take us very far, except for very short periods. Nor can the compulsory teaching of philosophy, ideology, and religion from first principles based on the view that they all preach the same thing. They do not : their raison d'etre is that they preach, and teach, different things (in fact, there is some *internal* dissidence within *every* religion so far studied) : In some of them the majority trend is to convert and proselytize (though there is almost always a minority which is oecumenical), in others (most trends belonging to the Hindu tradition, though not all) there is birth, rebirth, damnation, rehabilitation, but no conversion with or without coercion. Moreover, almost no ideological tradition is monolithic and homogeneous, even the most 'primitive' (as is now recognised) is differentiated by alternative interpretations or scope for such interpretations, being also 'autocritical' to a greater or lesser extent. Can we not bypass such complexities by imposing a doctrine that differing religious convictions are of concern only for the individual's 'inner life', and, at any rate, religion and ideology should be kept out of politics? The answer is again : no. In some religious and ideological traditions (e.g., Islam, the Sikh panth, Buddhism, different brands of Utopia or Messianism) religion and ideology simply cannot be the individual's private affair : it is a way of life. Even in most strands of the Hindu tradition, where there is recognition of the disjunction between ideological status and political power in practice, ideology is a way of life, not excluding political life. Can we leave ideology alone and work for ethnocommunal peace by erasing all references to ethnocommunal strife in school or college textbooks of economic history (to be taught in place of political history), or of modern political history (the 'history of the national movement')? Unfortunately half-truths not only should not, but cannot be corrected by counter-half-truths. Granted that the *whole* truth about the past can never be known, any more than the whole truth about the present can be, knowing and remembering only what was good in one's own or other ideological traditions is not the best way to establish an ethnocommunal peace which will last into the future.

So, precisely in order to enlarge the economic cake, so that all can benefit, the ideological status quo (and, to a greater or lesser extent, the political status quo) has to be changed so as to harness human capabilities for development. By cultivating separatist ideologies, which are less and less estranged from each other, which are less and less falsified for apologetic purposes, which recognise criticism, contention, clash of ideas, not excluding conversion from one set of ideas to another, as the natural diversities in human societies through the ages.

To repeat : there are no short-cuts for those who are estranged from, essentially because they are ignorant of, other ideologies which compete with the only one they know (and that too imperfectly). Few can replace total ignorance of other ideologies with adequate or complete knowledge of such competing ideologies. But as long as each victim of underdevelopment in South Asian countries takes a few steps out of the darkness of ignorance of ethnocommunal ideologies other than his or her own, and allows or encourages others to do so, a new beginning will have been made. This may set the stage for enhancing human capabilities on the basis of an ethnocommunal peace which is not fragile, so that continuous and sustained economic development may at last begin.

CHAPTER 10

CONCLUSION

The 'new approach' to the study of the economics of development, promised to the reader in the Preface, and worked out in the rest of the study, introduces several innovations in theoretical understanding and policy prescriptions, of which the chief, in the perception of the author, seem to be the following :

1. *Actual accumulation* : Every economy, underdeveloped or developing, generates aggregate social surplus, ultimately calculable in physical (material) terms, out of which there is an actual accumulation and reinvestment of surplus (zero or positive) also calculable ultimately in physical (material) terms of so many tons of rice, or wheat, or cement, or coal, oil, and steel, etc.

2. *Potential accumulation* : Overestimation of the potential social surplus available for faster accumulation to promote development occurs, when the 'own rate of surplus' calculable for any sector (e.g., excess of rice output over input of rice used as seed, or basic diet of farm labourers, or coal output minus input of coal for running generators in a coal mine) is mistaken to be the 'social surplus' of rice or coal, etc. This dislocates the development process. Such dislocation occurs also if the 'hidden savings-investment potential' of rural (or urban) underemployed, or unemployed, surplus labour is overestimated on the assumption that labour alone, without materials or food or land, can be the source of faster accumulation.

3. *Basics and non-basics* : The distinction between 'basic' goods and activities and 'non-basic' goods and activities is crucial. The former comprise essential consumption produced in essential sectors (e.g., rice produced in paddy-producing farms and rice mills), *as well as* essential producer goods and activities which produce them (e.g., cement, or iron, or cloth, and cotton) which, directly or indirectly, enter as inputs into their production. The latter comprise non-essential or

'luxury' consumer goods (e.g., superfine cotton cloth) and activities producing them *as well as* producer goods and activities which, directly or indirectly, enter into their production (e.g., special types of weaving machines, or specialised skilled labour).

4. *Development : continuous and limited* : Reinvestment out of the social surplus of basics for increased production of basics leads to continuous and sustained development. Reinvestment out of social surplus of basics (and of non-basic producer goods) for increased production of non-basics, leads to limited development, where the development impulse peters out sooner or later.

5. *Education—human resource development-is basic* : Education—formal and informal—at primary school, secondary school, as well as at college and university and technical institute level, is basic. To expand higher education and not lower education, or the other way round, will both lead to limited development by creating bottlenecks as regards the development of human resources and capabilities. Education is basic, on a par with food, shelter, fuel, fertilizer, steel, or oil.

6. *Controls* : Licences and controls over productive activities *permit*, but do not *promote* development and should be minimized instead of being maximized. Their proliferation only accumulates power for its own sake in the hands of controllers and those who control them. Their proliferation only adds non-basic activities to the system and slows down development.

7. *Public ownership and work ethic* : Given an immanent tendency to divert basic resources to produce non-basics, to promote development and make it continuous, it is necessary for an activist State intervention to take the form of enlargement and transformation of the publicly owned sector so as to enhance human capabilities and a development-conscious socially-oriented co-operative work ethic in farms, factories shops and offices, while reducing internal controls (directives) within the public sector to a minimum.

8. *Ethnocommunal peace and development* : In South Asian and South-East Asian countries, without any exception, in addition to other efforts to enhance human capabilities for development, ethnocommunal peace is a *sine qua non*. It can only be achieved by a sustained effort to reduce mutual estrangement arising from ignorance or prejudiced knowledge

of the distinctive, *competing* ideologies, histories, politics, economics within ethnocommunities other than one's own, which pervade members of all social classes of all levels of education in these countries.

The main novel findings of the present study also make an opening towards further intermeshing of empirical and theoretical studies to increase the relevance of both.

NOTES

General Introduction

1. *Rosenstein-Rodan P. N.* (1943) Problems of Industrialization of Eastern and South-Eastern Europe (in Agarwala & Singh (1960) pp. 245-55).
2. Datable roughly from the Tinbergen and Bos model of educational planning (see Blaug (1969) ed., pp. 125-51) and Harbison and Myers (1964)—both published in 1964.
3. See Wittgenstein (1921, 1981) p. 74 : 'What we cannot speak about we must pass over in silence'.
4. Akerlof (1976) p. 610, quoting Hutton (1961) writes 'caste rules dictate that violaters of caste rules will be outcasted ;...those who fail to treat outcastes as dictated by caste code will themselves be outcasted...An outcaste in India is permitted to hold only scavenging (or other polluting) jobs...'. This is simply not true of castes in recent times (see Dumont (1966, 1980) pp. 182, 395, Dumont (1986a, pp. 340-43)), and never was. Of course, under the classical code of Manu, in Law of Manu (ed. Buhler (1886, 1984) xi, 181 (pp. 467-68) it *is* laid down that : 'He who associates with an outcast, himself becomes an outcast after a year ...by using the same carriage or seat, or by eating with him'. But the same rule makes it clear that such association does *not* involve 'sacrificing for him, teaching him or forming a matrimonial alliance with him' and that any guilt by association can be ended by atonement through penance prescribed for the sinner. There are also clear rules laid down for relaxation of such rigidities 'in times of distress', as well as atonement through cycles of rebirth. Caricatured accounts of alleged caste rigidities, excommunication and guilt by association should be ignored if caste phenomena are to be understood seriously for understanding problems of development. See Bose (forthcoming) Ch. 6., sec. 6.2, for a further discussion.

Chapter 1

1. The focus was on trans-systemic features in the sense that they were thought to be common to both capitalist and socialist property relations in different underdeveloped countries, and *also* in the sense that a world-wide commitment by both capitalist and socialist countries to develop underdeveloped countries was assumed as being feasible, though Bronfenbrenner (1955) struck a discordant note.

2. See, for example Basu (1985) p. 68 : for reference to the (new) problem not visualised earlier that'...to remove urban unemployment directly by creating more jobs had the opposite consequence'.

Chapter 2

1. Of 32 countries reporting on OECD list classified as lowest-level developing countries (LLDCS), 12 had per capita growth 1970-80 at more than Lewis's 1%, and 8 at more than Singer's 2%.

Chapter 3

1. Unless, of course, Baumol reasoned that pecuniary external economies were manifestations of *disequilibrium* in general equilibrium theory, and therefore were *ex definitione* eliminated when equilibrium is reached. But, in that case, it is not clear why the topic is dragged into a discussion of problems of development and economic growth which he refers to on pp. 29-30, though the title of the book is Welfare Economics and the Theory of the State.
2. At least as far as the debate about the role of external economies in problems of underdevelopment and development is concerned.
3. In Singer (1952, 1960) at least, where he relies heavily instead on a 'dynamic equation' of the Domar-Harrod type (op. cit. p. 393).
4. Though Balogh (1961) pp. 4-6, still echoes the old-fashioned Pigovian view that the conditions of optimum being reached through the price mechanism require as a condition 'perfect competition or a degree of monopoly or oligopoly (which is) uniform in all product and factor markets', Baumol (1967) p. 63 expresses the more up to date view that 'it is now clear that even with conditions of perfect competition there is no reason that independent actions of the members of the economy will always assure the maximisation of their aggregate welfare...(even though) Pigou in chapter 3 of Socialism versus Capitalism assumed a 'reasonably competitive economy' will achieve ideal output with only a few corrective taxes and bounties'.

4a. Bardhan's 'black box' contains some strange articles. They range from an unqualified and unelaborated stricture on 'union pressures on wage and salary settlements...relatively liberal housing ...amenities to workers' which deprive the 'really poor' of benefits of the public sector' to frustrated exasperation that 'area-level infrastructure 'facilities' being by their very nature (sic) area-specific rather than *individual* farm-specific' (my italics) 'largely flow to those who are better-off and more well-equipped to utilize them'. One wonders whether workers are expected to go on living in mud hovels, when executives live in well-furnished flats. Or whether any social and individual ingenuity could ever devise infrastructural facilities which in *all* cases (like home-delivered postal articles) could reach every door-step in village or town, so that they are not cornered by the better-off.

5. e.g., Leontief (1956, 1986) p. 109, Table 6-2 na (pp. 111, 113) and Appendix 6-3 (pp. 123-28) for examples of Leontief's labour coefficients interpreted to mean this, though column heads refer confusingly to 'man-years'. Regrettably, no one doing work with input-output tables seems to have bothered to make a distinction between man-years or man-hours of labour (the labour coefficient) and, as Leontief puts it himself, 'wage-dollars' which are *not* the same things.
6. See Bose (1980), especially Appendix 2 for textual evidence.
7. See n. 5, above.
8. See references to Nurkse and Ahluwalia and Chenery in the text..
9. Others, e.g., Samuelson in his writings on the 'non-substitution theorem' for Leontief matrices makes the assumption explicitly to demonstrate its inapplicability to any real-life situation. But Dobb (1960), p. 49, keeps Nurkse company by assuming that 'machines are made with 'unassisted labour' (or at least the 'mother machines' which make machines are), as does Sen (1960) who assumes (P. 22) that 'capital goods can be made by labour alone'. (Sen later pp. 52-3) drops the assumption and adopts the Leontief-type of assumption that the proxy for labour-time can be bundles of cotton or of cloth taken as 'composite' wage-goods.
10. See Marx (1893, 1957), pp. 373-74 ; the extract is reproduced in Bose (1980) p. 194. The point at issue is whether in Adam Smith's or Marx's or in our times, anything is produced by pure, unaided labour, without the use of materials (raw materials, or food). The answer is obviously : no. Even members of food-gathering tribes discussed by anthropologists, and occasionally by historians and sociologists, use materials obtained partly by (maybe direct) exchange in the form of reciprocal 'prestations' with other men; and partly by what Marx referred to as 'exchange with nature'.

Chapter 8

1. But even the most pious apologetic social theories contain the seeds of self-destruction or of reconstruction and revitalisation, as has become clearer in the late 20th century than it was in the naive 19th century.
2. Baldwin (1986) expresses similar views. But he emphasises the wide dissemination of 'scientific and engineering' principles (p. 1063) and not social theory, and seems to want these principles to be taught as compulsory courses in colleges.

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